1988

MARCH 1987

CURRENT NOTES

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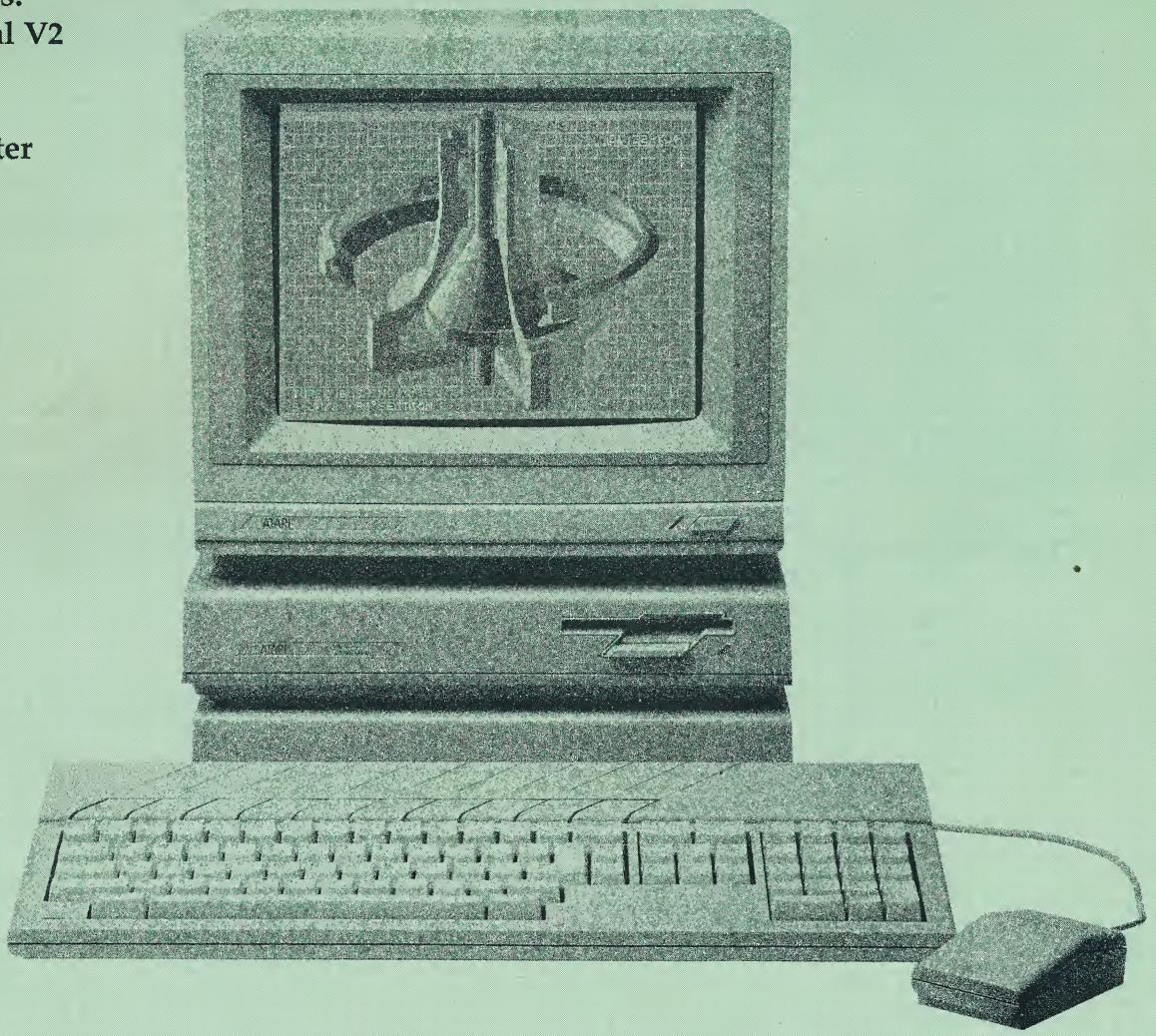

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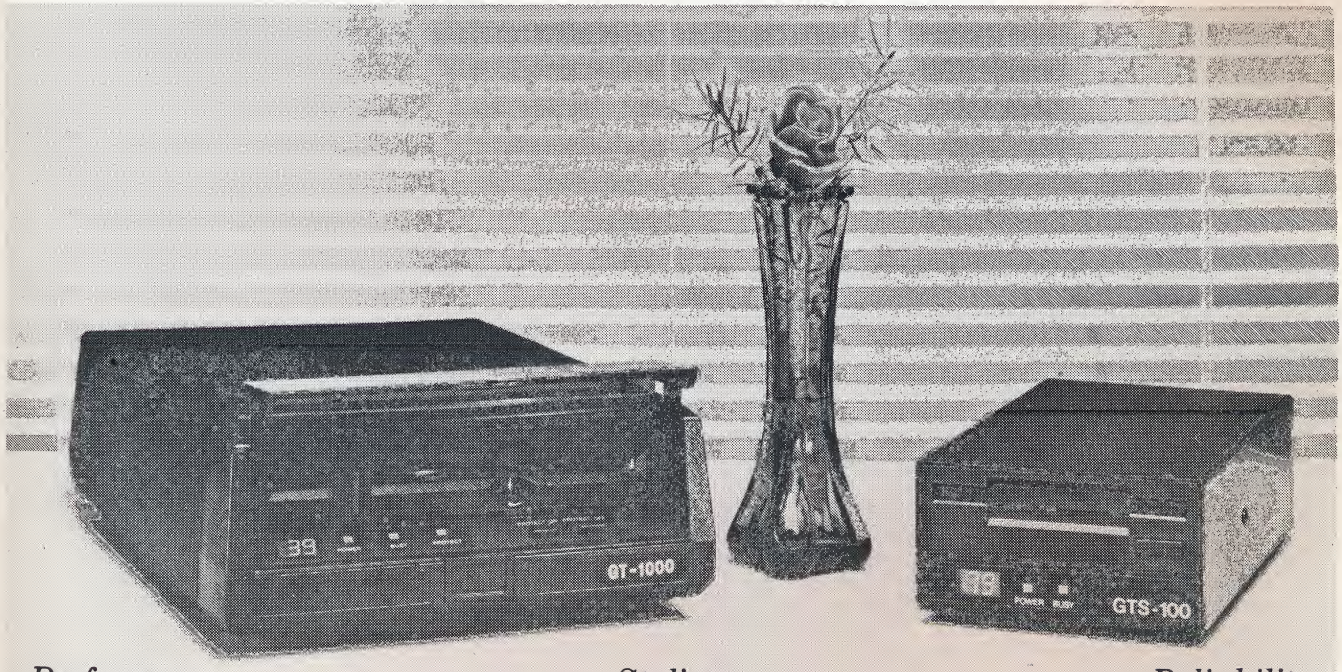

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Editorial

by Joe Waters

In the past year, desktop publishing has become a hot market. As interest has grown, so too have sales. Increasing sales means lots of money and lots of money means lots of people trying to get in on the act. Atari is no exception. At COMDEX last fall, Atari showed off their MEGA computers linked to their laser printer and proclaimed that they were going to be a factor in the desktop publishing market. Well, this is four months later. How are they doing?

Before we look at the prospects for desktop publishing with Atari equipment, I should point out that I am a desktop publisher. I work on *Current Notes* at home, in my spare time, on a desk with a personal computer and a laser printer close at hand. Each page you see in *Current Notes* is precisely the page I give to the printer. The printer takes that page, photographs it, and makes thousands of copies.

I started out publishing *CN* using my Atari 400, *Atari Writer*, and a Panasonic 1091 printer. *Atari Writer* could handle double columns and had a page preview feature, so I could do my editing on the screen until things were just right and then print out the final page.

I could do it on the 400, but it wasn't particularly fast or convenient. After two issues, a new assignment in my regular job left me with an IBM AT and *Microsoft Word* at my disposable. My third issue of *Current Notes* was done on the IBM.

Now many of you may regard this as heresy. However, the fact of the matter is my time is very limited and using the PC with *MS Word* was an order of magnitude more efficient than doing the newsletter on an Atari 400. As *CN* grew, the benefits of the PC in handling a large database of subscribers were also greatly appreciated. *Synfile* was taking up to an hour to sort through a database of only 700 names. That same task on the PC could be accomplished in a matter of minutes with *dBASE III*. I just couldn't affort to use the Atari.

Nonetheless, *CN* is an Atari publication and it was a shame that it couldn't be published with Atari equipment. The introduction of the ST, however, changed all that. Since the ST's have been out, *CN* has been published using an Atari computer and *ST Writer*.

I have not, however, been using an Atari printer. Long ago, I saw the advantages of laser output over dot matrix, and I purchased a QMS Kiss laser printer. At the time, the Kiss was the most inexpensive laser printer available. It came with about nine fonts built into the printer and, although the memory was limited, I could, in principle, download some additional fonts, but it had no inherent graphics commands like those you find on the Postscript compatible printers or the HPs. All it did was pretend to be a letter quality printer such as the Qume or Diablo, or the Epson dot matrix printer.

Besides being relatively inexpensive, this arrangement had some additional advantages. There wasn't much software available for the ST, but what was available could, generally, send output to an Epson or Epson-compatible printer. So, if I told the Kiss, pretend you are an Epson, I had a good chance of getting output printed from my software packages.

I was never particularly pleased with the fonts available to the Kiss when it was in the Epson emulation mode. So, last June, I switched to a Qume emulation and learned how to download, and use, other fonts. That is how *CN* has been produced since.

But now, Atari has its own laser printer and *CN* has purchased that printer. You see, we're still trying to be an all-Atari publication. Over time, you can watch the pages of *CN* to see just how is the "Atari" solution to desktop publishing progressing. Indeed, in this very issue, you can see the results of Frank Sommers month-long effort to get the Mega, the Atari laser, and *WordPerfect* working together. The results are on page 66. As you can see, the final result, in spite of intensive efforts, is still disappointing.

Another example can be seen in the CN library ad on page 15. This was done with *Publishing Partner*. Unfortunately, since it took 20 minutes to print that page, you can understand why more pages aren't done with *Publishing Partner*.

Why all the problems? Because the Atari Laser doesn't work by itself. That is how it was designed. It is driven by software in the ST. The only software available is the Diablo emulator released by Atari. But the Atari Diablo emulator is actually a Diablo impersonator since it does not completely emulate the features of a Diablo printer. Software that is designed to print to a Diablo won't work properly with the Atari emulator. That's why Word Perfect has had to jump through so many hoops just trying to get something to work. It's too bad. I wonder if all that effort is going to go down the tubes when, and if, Atari releases a new Diablo emulator?

Atari might say that their laser understands GDOS. Therefore, the whole world should change its software to use the GDOS drivers. Hmmmm. I don't know if the whole world will, or should, go along with that. I do know, however, that if Atari releases emulation software that runs on their laser, it is up to Atari to see that the emulation works. If there is an Epson emulator (and I understand there is one in Europe), it should behave just like an Epson. Similarly, if we ever get an HP emulator, it should behave just like an HP. If Atari can accomplish this, then there is great hope that a wide variety of commercial software can use their printer. In the meantime, unless you've got an awful lot of time to waste, don't rush out and buy it.

By the way, this page was done on a Mac II with *Pagemaker* and the Apple Laser Writer with no trouble at all.

Letters To The Editor

Dear CURRENT NOTES,

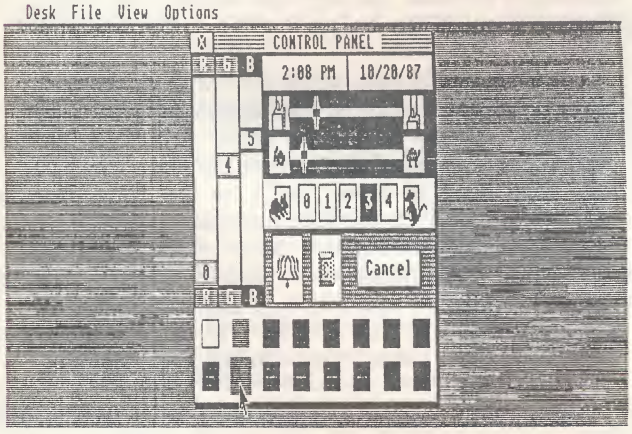
Below is a screen dump of my control panel settings. I have found the key repeat settings and the mouse setting to be the best in these positions.

Also, notice the second color square in the lower left hand corner that I have marked with the mouse cursor. If you click on this square to choose it, then set the RGB slide bar settings as I have, I believe you will like the effect. This gives you a much prettier blue screen than the default green of Atari's.

After you have tried these settings and if you like them drop down the OPTIONS menu and save the DESKTOP and these settings will automatically be installed when you boot your computer the next itme. Of course, color is a matter of personal preference, but I believe you will like the pleasant changes.

When you load a program such as *Word Writer* or *Data Manager*, their default colors will be used. After loading any of these programs, go to the DESK menu and click on the CONTROL PANEL and your new colors will be installed once again. The new settings give you a nice blue with a nice shade of red in these programs.

Larry Curry
Tipton, IA



Dear Joe,

The accompanying article on computer protection originates with Harry Steele of "A Bug", Boston and via the ham publication "Ad Astra". Hams are by nature very cheap individuals and always looking for ways to save a buck so this points out how we make protective devices for very few dollars. Strips with 6 receptacles are many times available from K-Mart for around 6 or 7 dollars. Three of the MOVs installed as directed will give you 6 spike protected sockets. The good GE MOVs (GE#130 LAI,130V,10A) can be purchased from BCD Electro at 65 cents each with a surcharge of 95 cents handling and $1.85 shipping so if several fellows get together for an order, it makes it much cheaper. BCD is P.O. Box 830119, Richardson, TX 75083 1-8900-456-2233. They will accept credit cards.

This installation may require some soldering and if you do not get into this type of work, take it to some friendly ham and have him fix it up for you. Most of them are very handy with an iron and have the burns on their hands and forearms to prove it.

Wm. R. Doctor
St. James City, FL

[Thanks for the submission. A lot of our readers like to tinker with their computers (myself excluded!) and will appreciate this info. You'll find the article reprinted on page 33. JW]

Dear Fellow Atarians,

Enclosed are some articles on Atari from an Amiga magazine. I thought you might be curious about what they say. I have an Amiga friend at work and I always look to see what they are saying about us. I went and saw an Amiga at a friends house one day and.....I told my Amiga friend the best thing he could do was to connect an Atari monitor to his system to clear up his fuzzy video. Since he has not seen an ST, he could not believe the Atari monitor is clearer. He kept bragging about howe he can multi-task, two windows opened with two programs running in each at the same time. I said that was cute, but how practical is it? I mean, how many heads do you have on your body? Come on, how many people out there think they can play a game & type a letter at the same time? He said well, let me show you some graphics. Here is where I thought he would truly blow me away, after all I had read about the Amiga. What a let down! I didn't see anything we couldn't do or already have duplicated. Big deal. I'll stick with my ST! I still think the graphics are better and sharper! If you really want a laugh, ask an Amiga person to switch into their Hi-Res 640x400 interlaced. The picture jumps up and down so much it looks like a film that has jumped off the sprocket!!! The only thing I walked away with that I liked was the sound chip they have. Computer-generated sounds are greater than ours. The only way we can compare with it is digitized sounds.

Conclusion: Fellow Atarians don't sweat it! They ain't got nuthin' Just a lot of hype. Thank you again for a great magazine. It's my favorite!

Roger Tolbert
Ozark, AL

ST UPDATE

By Frank Sommers

LATEST NEWS IN THE ST WORLD

Electronic Change

A Thousand Flowers, A Hundred Products -- Social and technological change seem to be speeding up, often too fast for entire cultures, even for the family, for the youth, for us to comprehend and then to meet and to try and conquer the challenge. We sense we live in the most exciting of times. From the invention of television to computers to space travel to lasers to the highest of high tec, our world continues to astound, as it hurls itself forward in ever increasing competition. Progress according to China's Mao was the product of letting a 1000 flowers bloom, read Red Brigades, and then letting them fight it out as a form of social evolution. Sony Corp. has already researched and developed the product, often several of them, that will replace the one they have just released for sale to ensure they win the battle with their competition. Atari Corp., with whom we are seemingly locked in a love/hate "relationship", apparently has, or is forced to have a different formula for "change", read profit. While being bombarded by its fans and customers with urgings to "get the product to the shelf", at least three times a year, winter and summer at CES and March in Germany, it R & D's and displays a bowl of dazzling electronic wonders, Atari then let's the market place decide which they will produce. But are they forced into this or risk loosing their already limited audience?

Make It Work

But "the more things change, the more they remain the same," said that greatest of great French philosophers, Voltaire. True? Will all of Sony's radios evolve into one basic radio? Already has. It's now merely a question of how creatively and uniquely it can be packaged. Will all computers evolve into one giant IBM. Never! But like car engines that settled on one basic common fuel for power, certainly even now computer manufacturers are seeking a standard, seeking a constant for all machines to be able to run all software. From the dawn of time, change has been viewed as coming with the speed of summer lightening and again and again the pressure of this change forces us to seek a constant, a standard by which to live and work so we can go forward, if only to encounter more change, and newer and more exhilarating electronic marvels.

But is it really the "constant" that we are ever after, the thing that makes everything fit together and "work". And how! What should that mean for Atari? Please, no more change, no more variety, no more "new" until those exciting things you have already given us, from the 800's, thru the XL's and XE's and the ST's and the Mega's, and the laser printers and the CD ROM drives, until the latest of them can be made to function properly as parts of a whole and not just parts. Please, get it on the shelf and make it work before using your limited resources and manpower to dazzle your American and European public with things so new.

Hardware

Hannover - Germany's massive trade fair is a challenge to even world class walkers; the "Messe" grounds stretch out like a Kansas plain. But there, within a neatly adorned small pavilion Atari will be displaying its wares.

The Brunhilda of their show will be Atari's 68030 machine, the 32-bit computer that is Atari's answer to Apple's Mac II. Running at 25 mega hertz according to some, and 15 Mhz per others, it will have a standard 4 meg aboard, run on a UNIX 5 operating system; it can be either a stand-alone machine or a unit box which will connect to your Mega. It is reportedly incompatible with the pre-Mega ST's. The monitor's resolution will be somewhere between an ABAQ and an ST. We put it at about 640 x 480 in color.

Around the corner with its veil of mystery finally removed will be the ephemeral, so long whispered about, but never seen, prototype of the "EST", the Enhanced ST. Towering over the EST, like King Kong in power, will be the final version of that gorilla of parallel processing, the ABAQ. Dates on availability and details for what German's call "Die Neuheiten", and we simply "the new things", will be announced at Hannover, but it should cause a bit of a stir. Atari's credibility is much higher there, particularly in Germany.

The Mystery Buss - The unused buss on the Mega ST's has confounded all electronic sleuths thus far. Atari will release no data on the specs for the buss to its developers. Could it be they have a box already designed for it? If not, then such items as hardware developers might create for it are going aborning. Another possibility is a video card that would provide increased resolution for the rumoured "Big Mega Monitor", i.e. 1000 x 1000 approximate resolution. Anything that would serve to make the Mega more attractive is desirable. U.S. Mega ST sales are reportedly disappointing. The incompatibility problem with approximately 15% of the existing software remains an annoyance, but not sufficient reason to depress

sales. Price and lack of software that will permit the Mega's to perform unique tasks not available on the other ST's are at the top of the "because" list.

Software

European Competitors - *Signum*, the software editor that renders near laser quality print on a dot matrix, has returned from Europe with all its belongings. Formerly it was fun to play with, now it is described as being the equal of *Publishing Partner* "with incredible output". *Caligrapher*, on the other hand, is seen as an editor and drawing program that "is still not all there" by some, and flaky by others. But LEX P*D*Q, running on the IDRIS system, is purported to be able to stop them all, "a powerful full function word processor with a spread sheet and data base built in". Exact arrival date not available.

CAD Supreme - *JIL2D*, yes, that's the name of it, *JIL2D*, and a whale of a CAD package it is. At present unfinished and out there briefly as a public domain product, it is described as "a most advanced CAD program with spectacular design features" by CN columnist, Jeff Greenblatt, himself an architect in real life. Originally it was to be M-CAD from Migraph and then difficulties arose, and the author put it up on bulletin boards as PD for a brief period. We understand the package is now being completed and should be out in late spring.

$$$ Manuals $$$ - To make the ABAQ work will require thousands of developer hours put into mastering the arcane world of parallel processing and developing software that will work, produce, and make it all worthwhile for those people needing super speed machines. To this end Atari is selling 500 developer kits, no more, mind you, for $5000. These will be available shortly.

Install, Install, Install - Most of the CN authors we have talked with have had difficulty installing *Microsoft Write* from Atari and getting it to print on their printers. While clearly not as powerful as *WordPerfect*, it had the advantage of letting you see on screen what you would be printing, and a much shorter learning curve. Wanting to print a page or two in this issue with the new Atari laser and one of the new wordprocessors, we hurried out and purchased a copy (Atari, with their traditional marketing prowess, had failed to forward a review copy when the program was released). After three days of trying to install it with the advice of resident "wise men" and with no tec-support telephone line available at Atari, we gave up in despair. Subsequently, when Neil Harris discovered our plight, he immediately modemed us his "assign.sys" file. Unfortunately, that didn't appear to solve our problems. While we finally met all the installation road marks, and appeared to have successfully put the devil in its place, the Atari laser in Graphics print produced nothing but elongated superscript no matter which of the four available fonts we tried. Score card: of the five CN authors who tried to write and print with it, only one succeeded in doing so on his dot matrix. Next month we'll bring you Milt Creighton's detailed review of *Microsoft Write*, in the beginning so heralded because it put Atari in touch with one of the major software companies, and then thru numerous vagaries so long in coming.

Miscellaneous

Not Quite So - *Juggler*, the multi-tasking program that in the last issue of CN we had running Joe Water's BBS while he hammered out his editorials, would have done it, had CN's Managing Editor had a GEM-based BBS. *Juggler* will only run GEM-based programs, but Michtron is reportedly working on a *KSWITCH II* program which, if successful, would allow you to run up to five programs simultaneously. Gordon Monnier don't let Michtron give up and please insure it also runs on the Mega ST's; the current *KSWITCH* doesn't. *Wall Street*, the stockmarket game from Star Soft Development Laboratories (3331 Bartlett Blvd., Orlando, FL 32811) that we "glorified" last time is still a winner, despite the fact we failed to mention who had produced the stellar program. *Deskcarte*, the cartridge from QMI that does everything, doesn't allow certain configurations of Diablo 650, the Diablo emulator from Atari used with the laser printer and *WordPerfect* and *Microsoft Write*, to install on boot up. Whether this is the cartridge's fault or the emulator's is not clear.

Speed Clocks and Calgary 1988 - Last month's winter Olympics at Calgary, Canada should add credence to Len Tramiel's oft expressed conviction that the blitter chip is fully installed in the new Mega's and "...time tests will prove it". The question is how much time difference with and without the blitter there actually is. Tramiel may take heart that at Calgary a 25-hundredth of a second or less meant the difference between a gold and a silver medal on at least two occasions.

Now *Turbo ST* is about to quench the thirst you have developed for screen speed. Softrek, its developer, (2628 Martz Court, Orlando, FL 32817) claims that it performs in excess of Atari's hardware blitter in "nearly all textbased applications". A "software blitter", it installs as an accessory and with the click of a mouse is active. Ostensibly there is no chip to buy, no ROMs to upgrade and no opening up of your machine. Touted as running *ST Writer's* paging speed 100% faster and its scrolling speed almost 50% faster, *Turbo ST* claims to even accelerate the Mega ST's performance with the Atari blitter already installed. We will point for an early shoot-out between it and Atari's "fast draw" blitter chip. If *Turbo ST* meets its specs, at $49.95, about a third of Atari's total package, it should be a seller.

CLASSIFIED ADS:

520ST, SC1224 Color Monitor, 2 SF 314 DS/DDs, Modem, Clock/Calendar, Single-switch ST-Station (houses drives & pwr supplies), Lots of Software, hardly used. $895/offers. Call Fred (703)522-3265(H), (202)523-8985(W)

FOR SALE: Atari 520ST, mono monitor, single-sided disk drive. Call Harry Sanders (301)587-1323(H)

FOR SALE for XL/XE: Indus GT w/orig disks, DOS 2.5, Turbo Basic ($160); Infocom Set: Witness, Enchanter, Zork ($25); Sports Set: Touchdown Football, Star League Baseball, One on One, Gr.Am.CC Road Race ($35); Alternate Reality ($30); Wizard's Crown ($25). Call Jeff (803) 7598-2123.

FOR SALE: Atari 130XE, Rana disk drive, 1000E modem, Commodore 1702 color monitor, 1010 cassette drive, all docs, covers, cables, software on both disk and cassette, many Atari books, 80 pd/other disks. Everything in excellent condition. Make offer for package or separate. Call Harry (703) 769-5585 (day); (703) 250-4551 (evenings till 8:30pm).

APPLE ROMS FOR SALE: I have 2 64K Apple ROMSs required by Magic Sac, $47 postpaid for both or best offer. Ed Zahniser, PO Boxx 955, Shepherdstown, WV 25443.

WANT TO BUY 1040ST. Would like used one as second machine. Write with price & condition. Ed Zahniser, PO Box 955, Shepherdstown, WV 25443.

FOR SALE: Atari 1040ST w/color monitor and 1080 Panasonic Printer. Also software (Wordwriter, Phasar, Music Studio and more) and stand. Used 6 months. $850. Call WInchester evenings (703) 662-3715.

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CD REPORT

By Linda Helgerson

NEW CD-ROM TITLES

You may recall when Atari first unveiled Groliers Encyclopedia on a CD-ROM running on an ST. Although Atari has yet to seriously enter this market (indeed, Apple, is only now ready to announce its CD-ROM drive), the CD-ROM market place has been steadily growing. This report by Linda Helgerson, reprinted by permission from the February, 1988 issue of CD Data Report, will give CN readers some idea of what the latest new CD-ROM titles are like. JW]

Grolier Encyclopedia Updated. Grolier Electronic Publishing, now located in Danbury CT, unveiled the second *Electronic Encyclopedia*. Based on Grolier's Academic American Encyclopedia, the Electronic Encyclopedia #2 has a new and different user interface and research features. The updated encyclopedia contains more than 30,000 articles, of which 4,000 are either new or revised.

Cited by librarians, students and teachers as a superior research tool for students from grade 6 through college, according to Grolier executives, the newly revised encyclopedia is now considered to be appropriate for business research as well. "In this newest release, we have taken an outstanding product and made it even better," stated president Frank J. Farrell. "We have redesigned the user interface to make it even easier to use and added features requested by 64 researchers, librarians, students and business persons," stated Farrell.

Key features of the *1988 Electronic Encyclopedia* include pulldown windows and mouse support, hypertext functions allowing users to jump from the middle of one article directly to a related article without returning to the menu, a notepad to save parts of articles for later editing and printing, less frustrating and more intuitive saving and printing techniques, split-screen viewing for comparison of two articles, and an automatic timing mechanism that allows teachers to monitor how long students spend on research.

The updated, High Sierra format *Electronic Encyclopedia* disc will be available in April for $395. The CD-ROM requires 512K RAM in an IBM PC compatible computer and a CD-ROM drive equipped with Microsoft extensions. Online Computer Systems, Inc. created the search and retrieval software for use with Grolier's second disc.

Real Estate Data on Disc. Abt Books, Inc. of Cambridge MA recently retained the services of Knowledge Access International to publish *Real Estate Transactions for Massachusetts and Connecticut* on CD-ROM. The database will include all real estate transfer records from 1983-1987 for the State of Massachusetts and real estate records for 1987 for the State of Connecticut, totaling 825,000 records.

Clark C. Abt, president and publisher of Abt Books, said, "We believe the vast storage capacity of CD-ROM combined with a powerful search tool like the KAware2 (tm) Retrieval System from Knowledge Access will revolutionalize the way real estate transactions information is used. Real estate records have long been the foundation of consumer mass marketing information. Private firms, such as those in the home service industry, financial institutions, accountants, utility companies, and government agencies all rely on real estate information for business decisions and revenue projections. With CD-ROM technology, real estate transaction analysis that used to take a staff of professional researchers months can now be done in a few hours - all with an IBM PC or compatible, a CD-ROM drive, and a CD-ROM disc database," Abt stated.

Real Estate Transactions on CD-ROM for MA and CT will be searchable by seller name, buyer name, street number, street name, town, state, zip, lot type, condo unit number, purchase price, mortgage lender, mortgage amount and transaction date. The KAware 2 software allows users to select fields individually or in combination using Boolean logic. Output formats include a screen display of full or partial records by user selected fields, lists of mailing labels to printer, and ASCII transport to personal database managers, such as *Lotus 1-2-3* or *dBASE*, and to word processors. Sets of retrieved records can be statistically analyzed by various subsets - average purchase price, median purchase price and mortgage data compared by town, date, street, or other variables. The result is both numeric and bargraph output to screen or printer.

The *Real Estate Transactions on CD-ROM* disc will be available by June 1st for between $4-500 per disc with an annual update the first year and quarterly updates thereafter.

CD-ROM For Auditors. On January 13th, Arthur Andersen & Company announced the availability of its first disc for internal use containing SEC regulations, FASB and AICPA documents along with AA-specific standards and procedures and audit software. For use by auditors on location in client firms, the disc was developed by a team at Arthur Andersen using a customized version of TMS, Inc.'s *RESEARCH* software.

The multiple benefits of providing auditors with all necessary data on CD-ROM include fast access to technical matters in response to client questions, the elimination of pounds and pounds of reference books that previously had to be carried to client sites, and in general the increase productivity of an auditor's work. "More work in less time increases profit margins," stated Jack Dreiss, AA's partner in charge of R&D for the Accounting and Audit Division.

Pilot tests of the CD-ROM disc have occurred since June 1987 both within the U.S. and internationally. Arthur Andersen's *DATRAN* audit software was released to auditors for use on-site in portable microcomputers in 1983. "Since then, Arthur Andersen has sought to use the latest technology to make the audit process more and more efficient," stated Dreiss. "CD-ROM represents our most recent advancement," he said.

New State Case Law Series. CD/Law Reports, Inc., an Illinois corporation, will release March 15th the first in a series of State Supreme Court and Appellate Court cases on CD-ROM. Beginning with the State Of Illinois, CD/Law Reports intends to provide all law firms with CD-ROM-based, computer-assisted legal research at a reasonable price. Designed for attorneys who use an IBM PC/XT/AT or compatible computer and who have or will acquire a CD-ROM drive with MS-DOS Extensions, the CD-ROM discs can provide all necessary legal information without the use of expensive online systems, according to publisher Ron Fenili.

The first CD-ROM title - *Illinois Second* - contains 120 megabytes of data and is one of seven discs under development for the State of Illinois. The second disc will contain 420 megabytes of Appellate Second court cases. The intent has been to capture all law cases for the State of Illinois from 1818, and CD/Law Reports, Inc. has accomplished this by key entry with its own unique numbering system and all on its own nickel, according to Fenili.

Full text of cases using keyword, proximity or phrase searches is accessed using Creative Index's *FastFind* search and retrieval software. Discovery Systems mastered and replicated the discs. Beginning in September, the subscription price for the series of seven discs will be $7,000 including updates every three months. The comparable price for new printed editions, according to Fenili, would be $15,000 if you could get them. "Our interest is in providing computer assisted legal research with full text retrieval and non-predatory pricing," he said.

CD/Law Reports is located in Wheaton IL and is comprised of Phyllis Benham of CCP Publications, William J. Fenili, an Illinois attorney, and Ronald G. Fenili, a publisher and former sales representative for West Publishing.

Physicians' Desk Reference. Medical Economics Company of Oradell, NJ has announced the forthcoming publication of its *Physicians' Desk Reference* (PDR) on CD-ROM. Targeted for medical centers, teaching hospitals, and large medical group practices, the disc will make it far easier to locate drug information, according to David Sifton, director of Special Editorial Projects at MEC.

In addition to the well-known PDR, the disc will also contain the PDR for ophthalmology, the PDR for non-perscription drugs, and an impressive list of indexes so that information is quickly located by the physician with a specific quest. The six indexes include drug interactions, side effects, generic active ingredients, therapeutic categories, as well as the manufacturer's name and the brand name. Free-text searching is also available.

The disc will run on an IBM compatible system with 640K RAM and MS-DOS 3.1 operating system and a Hitachi, LMS or Sony drive. International Computaprint Corporation designed the software for use with the PDR disc and conducted all necessary data preparation.

The introductory price for the PDR CD-ROM is $395 until May 31st. Thereafter, for the single 1988 title, the price will increase to $495. In 1989, the price will be $595 and will include an initial disc and two updated discs in May and September.

GPO Catalog on CD-ROM. SilverPlatter Information Inc. has announced the addition of the U.S. Government Printing Office *Monthly Catalog* to the family of SilverPlatter-produced CD-ROM reference databases. The *Monthly Catalog* on SilverPlatter will include records from 1976 to the present and will be accessed by standard SilverPlatter retrieval software. SilverPlatter products are now located in more than 1,000 locations worldwide, according to SilverPlatter officials.

(Continued on Page 52)

COMPUTER LANGUAGES FOR THE ST

Which One Is Right For You?

by John H. Marable, III

There are many programming languages available for the Atari ST series of computers. If you are a first time programmer, or if you have learned BASIC and are ready for something else, or even if you are a seasoned veteran programmer, programming language selection is a difficult, but important decision. Each language has its advantages and disadvantages. For any given programming problem, the solution difficulty depends greatly on the programming language used to implement the solution.

This is not an attempt to review all of the programming languages available for the Atari ST. It is a description of the types of programming languages available, and some of the advantages and disadvantages of each. First, some definitions are required.

This discussion is primarily directed at high level languages, such as Basic or Pascal as opposed to low level languages such as 68000 assembler. High level languages, in general, are easier to program and are more transportable. (A program on one machine may be compiled and executed on another with little or no modification.) Assembly languages are difficult to use and are not transportable. There are several assemblers for the Motorola 68000 processor. Most use the standard Motorola assembly language pneumonics. No assembler for the 68000 family could use assembly code for any other processor. Assembly language results in the smallest and fastest executable program possible.

Language Implementation

There are three basic ways that a high level language may be implemented. It may be interpreted, pseudo-compiled, or compiled into native code. These are features of the implementation and not the language itself. In fact, some languages are available in more than one form. BASIC is available as both an interpreted (*Atari Basic*) and a compiled (*LDW Basic*) language. *GFA Basic* is available in both interpreted and compiled versions.

Interpreted languages are the most common and the most familiar. With an interpreted language, first the programming language must be loaded and then the source code program (the program as typed into the computer by the programmer) is loaded and run. As the program runs, each line of the source code is examined by the interpreter, interpreted into the appropriate machine language instructions, and executed. If a line is executed more than once, it must be interpreted again each time. The computer, in most cases, spends more time interpreting statements than it does executing them. Even a remark statement must be interpreted by the computer to determine that it is a remark requiring no further processing. If an error occurs during execution of the program, in most cases, the interpretation stops, an error message code is displayed, and thesource code is displayed with the line in which the error occurred indicated. Most interpreted languages have an integral text editor for entering, displaying and correcting the program source code.

Pseudo compilers generate a pseudo code which executes machine language procedures contained in a runtime library. This runtime library is loaded with the pseudo code. Sometimes the runtime library is a separate file that must be loaded by the source code at run time. This keeps source file size down, but the run time library must be on every disk that contains source files. This results in relatively fast code compared to the interpreter, but even a very small program might be very large after compilation due to the overhead of the runtime library. Some pseudo compilers will incrementally compile code from a source file to provide some of the advantages of an interpreter. A pseudo compiler is easier to write than a native code compiler. Once it is written, it can be easily ported to another completely different machine. This has resulted in the popularity of the UCSD Pascal P System. Versions of this are available for the Atari ST series.

Native language compilers result in the fastest, and smallest executable code possible for a high-level language. From the source code, directly executable machine language code is generated. Usually, this code is linked with machine language procedures from a library. This library might be similar to the runtime library of the pseudo compilers, however, only the procedures that are needed are linked into the source code. This allows the use of larger libraries and results in smaller code. The procedures are generally placed in line with the native code rather than being called as a subroutine, resulting in faster program execution.

Compilers vs Interpreters

In general, interpreters produce programs that are easy to write and debug, but are slow in execution, and require that the interpreter be loaded to execute the program. Compilers provide fast code, but writing and debugging the code is time consuming and tedious.

Source code is written using a text editor, then compiled with the compiler (requiring as many as four passes through the source code). If the compiler runs with no errors detected, then the program must be linked to create an executable file (another one or two passes). If errors are detected in the compile or link phase, then the editor is reloaded and the source code is corrected and the process is continued until no more fatal errors are detected. Then the program can be run, but wait. Now, the run time errors must be debugged.

With an interpreter, run time errors usually stop program execution and return to the program editor where the error is indicated. The programmer can examine the status of variables, correct the error and then run the program again until all of the run time errors are corrected.

With a compiler, a run time error is more difficult to locate. Often run time errors in compiled programs will simply cause the system to display bombs and crash, leaving the programmer no indication of where the error occurred and little indication of what the error was. Utility programs such as a symbolic debugger can assist the programmer, or he can program in debugging code to trace the execution of the program to locate the source of the crash, but the process is slow and difficult.

The ideal programming environment might be a combination of several things. First, a syntax checking text editor is a real time saver. Syntactical errors, such as unmatched quotation marks are detected by the text editor where they can be corrected as they occur. An interpreter is then used to detect and correct syntax errors that can't be detected by the text editor, such as a begin without an end or a gosub without a return. The interpreter is also used to debug any run time errors. When the program is completely debugged, a compiler which is completely com- patible with the interpreter is used to compile the source code.

Language Categories

A high level language can be classified in one of several categories:

* Unstructured Languages (Basic, Fortran, Cobol, etc) were the first computer languages. They remain the most popular today.

* Structured languages (Pascal, C, Modula-2, Ada, etc.) are the languages used by most professional programmers developing new application software such as word processors, spreadsheets and databases.

* Threaded interpretive languages (Forth, etc.) are relatively difficult to use, but are particularly useful for real-time applications such as robotics. Forth programmers are a small, but loyal group.

* Symbolic languages (Lisp, Logo, etc.) are the languages of artificial intelligence applications such as expert systems, although declarative languages (Prolog, etc.) are gaining popularity in this area.

Unstructured Languages

Unstructured languages were the first languages to become popular on mainframe computers in the 1960's. Unstructured languages are usually characterized by numbered lines, although modern implementations are getting away from that.

Fortran (FORmula TRANslation) has been popular with scientists and engineers. Its continued popularity is due to the availability of "number crunching" routines written over the years and ported from machine to machine. There are several Fortran compilers available for the ST including *AC Fortran*, *Prospero Pro Fortran* and *Philon Fortran*.

Basic (Beginner's All-purpose Symbolic Instruction Code), though largely spurned by professional programmers, is still the most popular programming language. This is due primarily to the availability of basic interpreters for virtually every computer made. Basic was first written at Dartmouth University in the 60's by Kemeny and Kurtz to be an easy to use, first language for students. It was the first high-level language to be implemented on micro computers by Bill Gates of Microsoft fame. Since then, basic interpreters have been packaged with most microcomputers at purchase. Some computers have basic interpreters installed in ROM inside the machine (the Atari XE series for example). Basic is usually implemented as an interpreted language. There are a wide variety of Basic interpreters available for the Atari ST including *ST Basic* (the one bundled with every ST), *GFA Basic*, *Fast Basic*, and *Real Basic*. There are also several compiled versions of Basic available including *GFA (Basic) Compiler*, *LDW Basic*, *Softworks Basic*, *Philon Fast/Basic M* and *True Basic* (by Kemeny and Kurtz, the originators of Basic).

The greatest advantage of Basic is its ease of use. That is not surprising, since that was

the original concept. Critics of Basic say that because of its unstructured nature it leads to "spaghetti code", source code that rambles through the program. Most Basic programmers make indiscriminate use of the "dreaded" GOTO statement. This makes program flow hard to follow without a large number of comments or REM statements. All variables are global, they are available everywhere in the program. This leads to unwanted modification of variable values, called side effects.

Modern implementations of Basic attempt to make it more structured. They contain program flow control statements that make the use of GOTO statements unnecessary. They even allow the localization of variables and procedures with parameter passing. With all of its so-called faults, most programmers will admit that it is easier to get a small program up and running in Basic than any other language.

Cobol (COmmon Business Oriented Language) is another popular unstructured language. It remains important today because many businesses are still using custom applications written in Cobol. Cobol programmers are still in demand to maintain and update Cobol programs written 20 years ago. As yet, there is no implementation of Cobol for the ST. There are, however, Cobol implementations for the IBM PC and even 8 bit CP/M machines. These implementations might run on the ST with the help of pc Ditto or the CP/M emulator.

Structured Languages

Structured programming languages are characterized by (1) block structure (Begin ... End), (2) absence of line numbers (always), (3) strong data typing (mandatory declaration of variables), (4) limited scope of variables, (5) parameter passing by value or by address, and (6) the five basic control structures: IF-THEN-ELSE, FOR-NEXT, WHILE, REPEAT-UNTIL, and CASE-OF. Most allow the GOTO statement but restrict its range to within the block. These features are worth discussing individually and comparing them to those of unstructured languages.

Block structure consists of the use of subprograms, subroutines, functions and procedures. A block structured program usually consists of a main program which does little else than call subprograms. Subprograms then call other subprograms or even call themselves (recursive programming). Each subprogram consists of a group of statements and should be functionally distinct. This makes the structure of a program easier to follow. A program block has delimiters that define its start and finish, the "begin" and "end" of Pascal or the terse { and } of C. A block may occur within a program or procedure, such as if...then begin...end else begin...end.

Program line numbers began when the primary means of input to a computer was punch cards. Each card was numbered and held one line of code. The numbers allowed the computer to determine the correct order of execution in case the cards were shuffled. Punch cards were succeeded by teletype terminals. Text editors on this hardware were line oriented. Line numbers were necessary to reference lines for editing or listing. Today's CRT terminals use full screen editors that reference lines with the cursor. Now, the only reason that line numbers might be required is for targets for goto or gosub statements. This is resolved in structured languages by the use of labels. A label is an identifier used as a statement. It might be declared as a label or it might be identified by a trailing colon. Eliminating line numbers makes it convenient for the programmer. Now it isn't necessary to renumber a program to make room for adding a few lines. Commonly used functions or procedures can be copied into a program from a library without the need to renumber.

Data typing is useful in that it makes it easier for a compiler to reserve memory for data. It also helps avoid several types of programming errors. Variable declarations are required for variables. Type declarations are required for complex data structures like arrays and records. A structured language carefully checks the types of arguments to operators and functions. It is not allowed to multiply a real by an integer variable. Because these operations are sometimes necessary, transfer functions or casts are available to convert data types. This requires the programmer to consider data typing more carefully and explicitly call the necessary transfer functions rather than trusting the implementation to make the decisions for him.

The scope of a variable, in structured programming languages, is generally limited to the procedure in which it is declared. These are known as local variables. Variables which are declared outside of any procedure are global variables, available anywhere in the program. Controlling the scope of variables limits the occurrence of "side effects". If you are in the habit of using "i" as a loop counter and you exit a loop to execute a subroutine which also uses "i" as a loop counter, you might return from the subroutine with an altered value of "i". In a large program, this type of error can be very difficult to find. In a structured language, the loop counter declared in the subroutine would be distinct from that declared in the main program, avoiding the side effects.

Current Notes ST Library

BASIC

#22: Sample Atari Basic Programs. ellips, wdsrch7, labels, star, rings, title, check, tesser, cribbage, mlabeler, sndtest, waveform, waver.
#130: GFA Basic No.1. GFA Run only version, terminal prg., sprite editor, torpedo game, fractals, arc-shell, format2, drawing prg., graphics demos: fx, display, gfa_cube.
#168: GFA Basic No.2. source to stone deluxe, ship combat, and recalbdb v2. (record album database including source and run-time prg).
#169: GFA Basic Help Disk. Seven tutorial/tip files on using GFA BASIC by John B. Holden, graphics tutorial, plus med rez galloping horse.
#170: GFA Basic No.3. diox ver 0.95 (easy user interface for simplifying construction of dialog boxes in GFA Basic. Outputs source file.)
#184. Atari XE Basic Emulator. Use this program to run simple XL/XE Basic programs on your ST.
#186: GFA Basic: Monopoly. Includes GFA source code to revised version of the popular board game.
#191: GFA Basic No. 4. GFA "tip" files #8-#11, paint program, 3-dimensional tic-tac-toe (mono); variable cross ref; line numbering.

C Language

#8: "C" Programs No.1. bob, dcos, drop2, drop3, foolish, fract1,2,3,4, mvline, mvline2, somb, stqix, stqux, stringar, trench, user.
#33: "C" Programs No.2. cc, digit, fixed, debug, qio, pi3con, printdir, ramfree, sound, ttool, vdisamp, windtst, and more.
#82: "C" Programs No.3. 3d, art-work, arxx, cc, clock, fractal, li, palette, print, qix, startup, ttool2, qio.
#123: Shareware C Compiler. By Mark A. Johnson. Includes C compiler, PD Ramdisk(s), PD command line interpreter, MicroEMACS text editor and bootup utility.
#133: "C" Programs No.4. Source to code uudecode & uuencode, kermit acc, citadel BBS & utilities, and VC-clone (spreadsheet program).
#156: "C" Programs No. 5 (source for file selector box, two make utilities, source for QT term prg, term prg that supports xmodem, ymodem, and zmodem.)
#171: "C" Programs No.6. bmodem (terminal emulator), sealink (transfer protocol), sed, ctag (two unix-type utilities).

FORTH

#53: Atari ST Forth-83 Model. Written by Laxen & Perry, includes FORTH language, editor, assembler, decompiler and Atari xbios functions.
#71: Forthmacs Ver. 1.1. (c) 1986 by Bradley Forthware, Forthmacs, the result of 4 yrs of intensive Forth development work on a number of 68000 based computers, is one of the very best Forth systems available.

Pascal & Modula 2

#31: PascaL & Modula-2. Pascal: OSS doc files (4/18/86 - aesvdi, char, file intro, pasall, onedrive, port, time), Pascal samples (pasfix1, scrndump, copy, dirlist, sounddem, copy2, datetime, compare, dump, convert2, istrval, mountain, shell, dseek Modula-2 demos (cube2, diamond2, fractal2, gemdem, lines, sierpins); BIOS and XBIOS functions; 11 files not yet tested on ST; VT52 emulator escapes.
#49: Sample Pascal No.1. convert2, graf, cntlin, prntscr2, scrdmp, dgen, cube, rlegen, reformat, stv924, multtask, polydiv, term, xreftb3, charsize, compare, copy, copy2, dirlist, dump, gembox, dirlist, dump, mountain, strval, theight, cursor, curstest and docs(copy2, intro, file, pasacc, time, port, aesvdi)
#83: Modula-2 No.1. Shell for arc.ttp with source; files for line A calls; patches to V2 of Modula 2; comand line interface; list directory; format disk; display free RAM; Huffman compression algorithmn.
#92: Modula-2 No.2. Includes ST Speech Modules and other enhancements to Modula-2. speech, talkhead, dataset, files, showchar, arghandl, bigsets,bits, fileio, scrctl, uscdstuf, 68k2, 68k3.
#93: Pascal No.2. latest from OSS BBS; checkers, chemparse, GEMARC Menu, Printmaster to Typesetter, Joystick Routines, Acc Loader, plus 20 more PASCAL files.
#110: Modula-2 No.3. Complete set of Modula-2 source code from the BBS of The Journal of Pascal, Ada & Modula-2; Samples of building library modules using AES calls; Source to access Russ Wetmore's Clipboard routines; String Library routines and more.
#111: Pascal No.3. Source to Atartrek (Star Trek for the ST); Source to Checkers; routines to format a disk from the OSS BBS; Sample routines to read in a DEGAS picture file; GEMDOS calls from Pascal and more.
#177: Pascal Source Code. Program to recursively search for displaying complete disk directory, statistics routines, complex math routines, and disk library program.

Other Languages

#124: Atari ST Icon Language, V6.3. This ICON language (a follow on to SNOBOL4) from the Univ. of Arizona was implemented by O. Rick Fonorrow and Jerry D. Nowlin.
#97: Little Smalltalk. Small- talk language, editor, manual, and ex-ample programs. (Files are compress-ed, but arc.ttp & arcshel2 included.)
#98: XLISP Version 1.7. Includes XLISP language, manual, XLISPE editor, C source files, XLISP-AI con-ference from CompuServe.
#181: XLISP 2.0. XLISP 2.0 with a language called VPS5. Docs from version 1.7 of XLISP.

Programmer Aids

#131: Programmer's Utility disk: uudecode, uuencode, bucket, kill, scach, make, setinit, verify, volume, 1_filepr, case, mase, ...)
#148: GEM Tutorials, Columns 1-10 (win- dows, dialog handler, resource files, rsc tree structure, raster operations, menus, user interfaces, VDI graphics)
#149: GEM Tutorials, Columns 11-17 (GEM hooks, GEM events, form manager, user inter- faces-2, coping with GEMDOS, interface potpourri #1, PC/ST Rsc converter)
#163: Editor Disk. PROEDIT by Jerry Cole: programming editor with outline feature; ConTEXT by Don Milne, designed for use with Modula-2.
#192: MicroEMACS, Ver 3.9 1/4. Latest version of popular text editor. Includes MicroSPELL, a spelling checker for use with MicroEMACS.

March Programmer's Special

Select any 9 Language Disks from this page and choose a 10th disk free. First 50 orders will also receive a 10-disk plastic case with their order.

Order from Current Notes Library, 122 N. Johnson Rd., Sterling, VA 22170. $4/disk plus $1/(6 disks) for shipping.

Reusable procedures in a structured programming language can be saved in a library file and brought into the source file using an include directive to the compiler. Several features of a structured programming language make this possible, absence of line numbers and local variables included. Another feature that helps make this possible is parameter passing.

Arguments to the function are passed to the subprogram when it is called. There are two basic ways to pass the arguments, by value or by address. When a parameter is passed by value, a copy of the variable is given to the subprogram which can be used without affecting the actual variable. In some cases, when an effect on the actual variable is desired, or the variable is an array or other large data structure, too big to copy, the address of the actual variable is passed as a parameter. This allows the subprogram to access and modify the actual variable.

The five basic control structures or variations of them are found in all structured programming languages. Some languages have additional control structures, but the basic five are all that is required for structured. Note the absence of the GOTO control structure. Most languages have the GOTO because it is useful for exiting from nested loops and other limited applications. Some languages have included control structures such as BREAK and EXIT to make the use of the GOTO the least desirable means of control in all cases. Still, the controversy continues.

Many implementations of structured programming languages are available for the Atari ST. Almost all are compilers or pseudo compilers. One structured interpreter is *Alice*, a Pascal interpreter. Compiled versions of Pascal include: *Personal Pascal*, *TDI UCSD Pascal*, *Philon Pascal*, *Pecan UCSD Pascal*, *Metacomco Pascal* and *Prospero Pro Pascal*.

There are more C compilers than any other language available for the ST. The original high-level language for the ST was *Alcyon C* sold by Atari as part of the developer's kit. Other C's for the Atari include: *Hippo C*, *Lattice C*, *Megamax C*, *GST C* and *Mark Williams C*. There is also a "shareware" C compiler available.

Modern Structured

There exists two structured languages which can be considered modern structured. They were developed only in the last few years and are just now becoming available. They are Ada and Modula 2. In addition to the features of a traditional structured language, they include such features as modular compilation and multitasking. Ada was developed by a committee appointed by the Department of Defense. Modula 2 was written by Nikolas Wirth, the author of Pascal. Both languages have the same basic objectives, and both have the same basic features. Because Ada was designed by a committee, it is complex and has virtually every feature that anyone on the committee desired. Compilers for Ada are huge and not generally available for microcomputers. (One is available for MS-DOS, however, minimum recommended system requirements include an AT-class machine, a hard disk and megabytes of extended memory. Compilation still takes forever.) Modula 2 is compact and efficient. Implementations of Modula 2 are available for most computers including *TDI Modula 2* for the Atari ST.

Threaded Interpreted Languages

Threaded interpreted languages (TIL) use a different approach to programming. The only popular TIL is Forth. In Forth, you don't write programs, you define words. TILs consist of primitives, words that have been defined as part of the kernel of the language. New words are defined in terms of the primitives and/or previously defined words. Definitions are built until execution of a single word is analogous to executing a program. Data in Forth is manipulated on a stack using post- script or reverse polish notation. This notation is unfamiliar to most people, but is really more efficient. In fact, most other languages convert pre-fix notation to post-fix notation internally prior to execution. This fact is hidden from the programmer in other languages.

Programming in Forth requires a different way of looking at a problem than other languages. Forth keeps the programmer closer to the hardware than other high level languages. Forth is fast and powerful. These features reflect the intentions of the author of Forth, Charles Moore, when he wrote the original Forth to control the operation of telescopes in an observatory. Forth programmers are dedicated to this way of thinking. A national Forth Interest Group has developed and placed in the public domain a version of Forth known as FIG-Forth. Implementations of this language are available int he public domain on virtually every small computer including the Atari ST. Commercial implementations of Forth for the Atari include: *4XForth*, *Mach 1 Forth*, *H&D Forth* and *Abacus Forth/MT*.

Symbolic Languages

It can be seen that the purpose of computer languages is to hide the details of computers from the programmer. Assembly languages uses pneumonics to hide the ones and zeros of machine language. High-level languages hide the details

of machine language. Modern structured languages use modular compilation to hide the details of procedures from the main program. Symbolic and declarative languages hide even more of the details from the programmer. The ultimate programming language is known as natural language programming. The combination of natural language programming with voice recognition and speech synthesis hardware may some day make possible a computer like HAL of 2001 fame.

Symbolic languages tend to hide the programmer from the data. While program control is similar to more conventional languages, data structures are different. Data is represented by symbols which are actually pointers to the data. Because many operations can be performed without regard to the data tye, the programmer doesn't have to consider this. Symbols are allocated and bound dynamically. This means that arrays or lists don't have to be dimensioned and can be composed of many different data types.

Lisp (LISt Processing), the first symbolic language, is almost as old as Fortran. Although Fortran is almost the same today as it was 20 years ago, Lisp has evolved significantly. *XLisp* is a public domain version of Lisp written in C and available for the ST. *Metacomco Cambridge Lisp* is also available. Logo is a somewhat simplified subset of Lisp. Digital Research *Logo* is provided with the Atari ST along with Basic.

Declarative Languages

Declarative languages have developed as a further effort to hide the details. Prolog (PROgramming LOGic) is the most common declarative language. A declarative language attempts to hide the details of the program structure from the programmer. In essence, the programmer describes the relations between the objects or data in symbolic logic and then asks the program to solve a problem or answer a query. This is the distinction between declarative languages in which you declare the problem and imperative languages in which you describe each step in solution of a problem. *Personal Prolog* and a public domain version of Prolog are available for the Atari ST. Included with the XLisp interpreter is a version of Prolog written in Lisp.

Symbolic and declarative languages are almost always interpreted. Because of this and because of the dynamic nature of the languages, they are slow and require large amounts of memory. They are, however, the languages of choice for artificial intelligence applications and the development of expert systems.

Your Choice of Language

There is an enormous variety of programming languages available for the Atari ST. Selection of a language can be difficult. Factors that should be considered include: cost (many are public domain or shareware), application (some languages are particularly well suited to specific applications), size (large programs need a langauge or implementation that allows modular compilation), and ease of use. If speed or code size are important, consider assembler. If only execution speed is important, use an interpreter. Most programmers have several languages and use the one best suited for the current problem. Some programmers, like me, just collect languages and implementations and enjoy programming in each of them for its own elegance. Happy programming Atarists.

CN ST LANGUAGE REVIEWS

[Over the past two years, CURRENT NOTES has taken a look at many of the languages currently available for the ST. An index of ST language-related reviews/articles is given below. Back issues are available ($2/issue) from CN (122 N. Johnson Rd., Sterling, VA 22170). For a limited time, you may also obtain all of these articles on a special CN Language Disk ($4) from the CURRENT NOTES ST LIBRARY. Ask for "The Language Disk".]

BASIC

REAL BASIC, S.Eitelman, Mar '88.
LDW BASIC REVISITED, S.Eitelman, Dec '87.
DBASIC FOR THE ST, S.Eitelman, Nov '87.
TRUE BASIC, J.A.Wrotniak, Sep '87.
GFA BASIC COMPILER, S.Eitelman, Apr '87
LDW COMPILER, V1.1, S.Eitelman, Apr '87.
LDW BASIC, S.Eitelman, Oct '86.
SOFTWORKS BASIC, S.Eitelman, Sep '86.
PHILON BASIC-M, S.Eitelman, Jul '86.

FORTRAN

AC-FORTRAN, J.Barnes, May '87.
PROFORTRAN, J.Barnes, Nov '87.

PASCAL

PROSPERO PASCAL V2, J.A.Wrotniak, Mar '88.
OSS PERSONAL PASCAL V2, J.A.Wrotniak, Dec '87.
OPEN ARRAYS IN PASCAL, J.A.Wrotniak, Jul '87.
PROSPERO PASCAL, J.A.Wrotniak, May '87.
PERSONAL PASCAL, E.Seward, Mar '86.

C

MEGAMAX-C: LEARNING C, S.Eitelman, Feb '87.

OVERVIEW

ST LANGUAGES, by J.Marable, Mar '88.
ST LANGUAGES, by J.Antoniades, Nov '86.

PROSPERO PASCAL V.2

Yes, Virginia, This Time They've Got It Right!

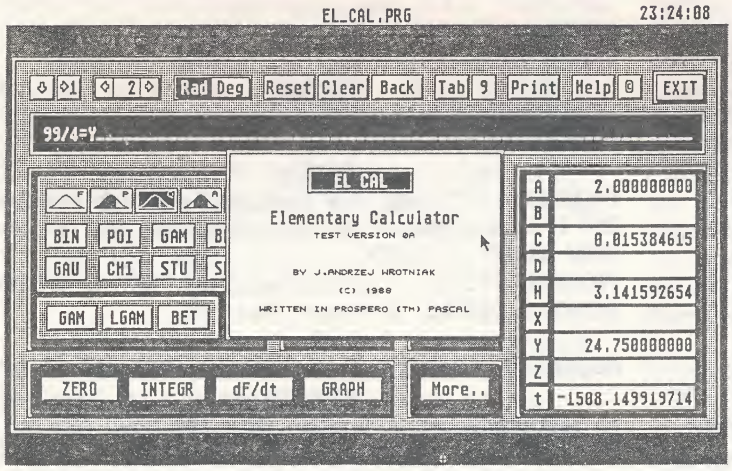
Review by J. Andrzej Wrotniak

The original Version 1 of Prospero Pascal (see *CURRENT NOTES* of May and June, 1987) was a solid mainframe-type implementation crippled by lack of a convenient (or almost any worth speaking of) user interface, practically no description of GEM bindings and few other things.

Then Prospero announced plans to release the next version, with all the bells and whistles, tons of documentation, and lots of other improvements.

The long-awaited moment is here: Version 2 arrived on these shores. For the last two weeks I have been busy using it. The best way to review a computer language implementation is to complete a large project in it. The more language features the project uses, the better, so my choice was to port into Prospero Pascal a program I wrote in Modula-2 to produce an "Elementary" Calculator (see figure below): more than 100 pages of source code, with extensive use of AES and VDI, some convoluted numerical algorithms, a lot of string handling, recursion, strongly modular structure, and what else.

My intention was to drop the project if the *Prospero Pascal* turned out not to meet my expectation. Two weeks and a case of Guinnes later I am back with a working program and good news: this is by far the best Pascal-family language (i.e. Pascal or Modula-2) implementation I have used - and not only on the Atari ST.



Contents of the Package

The package contains three volumes of documentation and two diskettes with programs: integrated shell/editor, compiler, linker, symbolic debugger (I haven't used it at all, so it will not be mentioned any more), three libraries (standard, DOS and GEM), library manager, cross-referencer and a little program to check whether the distribution disk files are not corrupted. The INCLUDE files contain the declarations of types, globals and library subprograms; enclosed example programs may be also of some help. The system can be used - with some inconvenience - on the 520ST and a single-sided drive, but 1 megabyte of memory with one double-sided drive (or 500k with two) seem to be a much more workable solution.

The User Interface

The master program in the Prospero environment is the shell/editor, P-BENCH.PRG. You can do virtually anything from within it: edit, compile (even without saving your code to disk), link and execute any other program. The shell can be configured to your liking (e.g. where to find what), and it behaves predictably.

The editor function of the shell is, the weakest link in the package. Not that there is anything really wrong with it: it does not crash, has all the functions you would expect, and is better than the editors coming, for example, with *Megamax C* (v.1), *TDI Modula-2*, *OSS Pascal* (v.2), *True Basic*, or *GFA Basic*. It has, however, a flaky feeling and slow response (you let the key go and the program keeps deleting characters forever). Maybe I'm spoiled after using *Tempus* for the last six months?

Also, I would like to see (in Prospero's or any other package - even Tempus does not have it) the possibility of redefining the key-to-function binding. Every editor I'm using has these definitions in a different way, and switching between editors becomes a painful experience. A fix for this can be provided by using a handy (though unfinished) desktop accessory, Startkey, published in the Winter issue of STart).

I also miss more disk operations: while in the shell you can delete files, but you cannot copy or rename them, or check the disk space. This would be very handy, and it needs just 50-60 lines of code.

After you get used to the editor, however, things become nice. You keep up to four files in the editor memory, compile, link and execute on the fly; a civilised way of doing things.

The compiler and linker are slower than in *OSS Pascal*, but faster than in *TDI Modula-2*; within reasonable limits. We are talking programming, not horse racing here. Simple programs can be linked just by clicking on a menu entry; programs consisting of more segments (or modules) should use a script file, listing the segment names in a proper order.

In general, I am quite pleased with the shell operation. After a while, you do not notice it and this is how things should be.

Modularity

The quality of the extended language standard was perhaps the strongest point of the original Prospero release. Strictly standard Pascal is close to useless in any serious programming, as it does not provide real modularity (separate compilation, data hiding), so from the very beginning the real-life implementations were providing extensions to the standard.

Prospero Pascal allows not only for separate compilation, but also for encapsulation of procedures (by this I also understand functions in the strict Pascal meaning) into "segments", roughly equivalent to modules in Modula-2 or packages in Ada.

All procedures in a segment may share "short-range global" variables, which remain invisible to the main program (or other segments) and which are not erased after returning from any procedure. The COMMON statement may be used to make them accessible from other segments, if desired.

Of course, you have to re-declare all accessed procedures and commons in the accessing segment (as opposed to just naming them in the IMPORT list in Modula-2), but this is only a slight inconvenience - and it allows for type-cheating (at your own risk, please!), as e.g. passing variable-size arrays as parameters.

To add this up: the modular features of *Prospero Pascal* fill - for me at least - 90% of the gap between Pascal and Modula-2 (the latter still missing a satisfactory implementation on the ST) and make the implementation a performer in developing of large programs.

Extensions and Libraries

For numerical applications Prospero provides the LONGREAL type (16 significant digits), with a clean function library (something TDI has been unable to provide for a year or so for their Modula-2 v.3). Pre-defined 1- and 2-byte integer types (signed and unsigned) are added to the standard 4-byte integers, and passing them as parameters to procedures presents no problems. The CASE statement may have an OTHERWISE clause; it may also specify ranges instead of single constants (1..3: Do_Nothing;), as in *Ada* or *True Basic*.

One extension I miss is the possibility of a clean exit from the middle of a loop (or from the middle of a procedure); again, only *True Basic* and *Ada* provide both these features, so maybe I am getting picky.

String handling is as complete as it can be, with all the functions you would expect (Copy, Pos, Insert, Delete etc.), and with variable-length string type on top of it. I would be happier if I also had the number-to-string formatted conversions (as e.g. WriteW in *OSS Pascal*, very handy!). This omission can be, however, remedied by the use of a RAM file (and there is a standard procedure to open one).

All language extensions may be disabled during compilation - the compiler will then accept only strict (and almost unusable for any serious work) Standard Pascal. This may be useful in some situations (such as computer class projects); it also was necessary to achieve the compliance with the ISO Level 0 Pascal standard.

Error Handling

I could list many other goodies here, but let me just mention one very important thing: so-called exception (or error) handling. In case of an execution error (as when one of your routines attempts to divide something by zero), *Prospero Pascal* allows you to pass the control to an error handler - your own procedure, which can tell the program, what to do.

Thanks to just this feature I was able to cut the size of my numerical module ported from Modula-2 in half; the TDI's implementation has a similar thing, but I was never able to make it work as I wanted it to.

The solution is not as convenient as the one in *True Basic* or *Ada* (again, you two together!), but it works just fine, and I found it more than useful. How could I live without it?

GEM and System Bindings

This is another significant improvement from the previous version. In principle, most of the AES and VDI routines still look very much like these in C (following the DRI conventions), but 20 or so were added to fill the most obvious needs overlooked in the C standard, or just to make things easier.

The procedures also now accept "normal" Pascal strings - no need to remember the null-termination. This may seem a detail, but makes a lot of difference by avoiding the unnecessary confusion.

All the GEM bindings are very well documented; most with appropriate program examples.

Low-level access to the GEMDOS, BIOS, XBIOS and Line A subroutines is also provided (some of the first three groups are rebound into higher-level procedures for convenience).

Once again, I was very pleased with the performance of these libraries. Soon it became even boring: no more exciting uncertainty (will this work, or not?), and I still have yet to discover any problems.

Documentation

Uniformly excellent. Roughly 700 nicely printed and densely packed pages in three volumes: one for GEM AES, one for GEM VDI and one for everything else.

The last one (really No.1) contains the instructions on how to operate the system, details of the implementation, language reference manual (there is a separate chapter listing the Prospero extensions, so you do not have to read the whole thing), and descriptions of the Atari-specific non-GEM procedures.

The GEM volumes are good enough to relegate the contents of one shelf with my GEM literature to the closet. The presentation is as good as in the *OSS Pascal* manual (very good by itself), but Prospero excels both in scope and in depth of coverage.

The manuals are complete on one hand, straightforward and accessible without insulting the reader's intelligence on the other. This combination is not so common nowadays.

Now, What is Missing Here??

Writing a review without any serious complaints is no fun at all. Luckily, I have a major one here: where are the accessories? There is not a single word in the manual on how to compile and link them, although the procedure Menu_Register is provided and documented.

All my experiments in this matter ended in more or less spectacular crashes. Either Prospero does not allow for compiling accessories, or the way to do it remains undocumented.

I do not think there are any real reasons why this feature was not included in *Prospero Pascal*; a gap in documentation may be rather suspected.

The PC and Fortran

It may be hard to imagine, but some people still insist on running programs on PC-compatibles. The main (if not only) advantage of these compatibles is their compatibility with other PC-compatibles, which - in turn - excel in compatibility with other compatibles, etc.

There is nothing really wrong with this phenomenon; after all this is a free society and there are even no laws against running programs on a dishwasher, if this is somebody's deepest desire.

For those people Prospero has a version of their Pascal running under GEM (Version 1 or 2) on an IBM-PC. There seem to be very few differences between both versions (and these are both minor and documented in the manuals), so the source code should usually recompile and run without problems. For the ST programmers this could be a very interesting perspective.

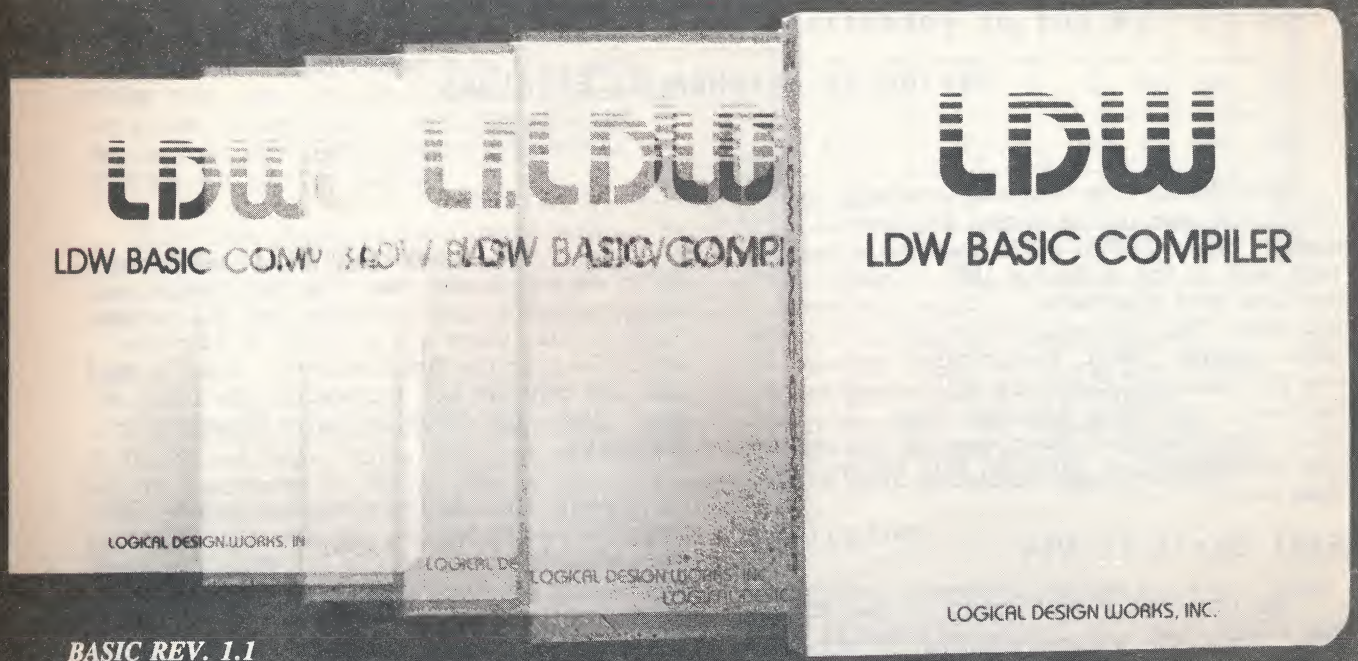
I have just ordered a PC version of *Prospero Pascal* (for work, of course); as soon as I get it, I will let you know how it works.

There is also a link in another direction: the new version of *Prospero Fortran* on the ST, with a possibility of mixing compiled segments with *Prospero Pascal* (the GST assembler works fine with both, by the way). Can you imagine adding your new flashy Pascal graphics to all your old Fortran mainframe programs?

The Bottom Line

I am highly impressed with this product. By now it is the compiler of my choice on the ST. It is not cheap - $150 list price (discounts may save you $20-$30), but well worth it. Upgrade from Version 1 ($39) is a steal. If you want to do serious programming in a civilised language on the ST, this is an obvious choice.

FAST JUST GOT FASTER...



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LDW BASIC Rev. 2.0 is a stand-alone development tool, but it can also compile any program written using the old ST BASIC interpreter or the new ST BASIC interpreter. It is also functionally compatible with BASICs for the Macintosh.

For more information or to obtain a listing of benchmarks contact Logical Design Works, Inc., (408) 435-1445
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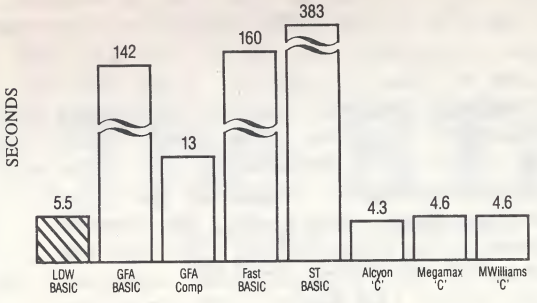
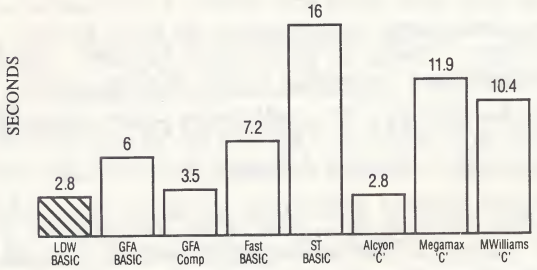
Compare the following benchmarks and see why LDW BASIC Rev. 2.0 leaves the competition behind!



SIEVE 10 ITERATIONS



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REAL BASIC

A Lot of Potential, But It Still Needs Work

Review by Stephen D. Eitelman

Real Basic, from Computer Crossware Labs (CCL), has been on the market for several months. When *CURRENT NOTES* received a review copy back in the spring of 1987, a number of problems were discovered. CCL was contacted, and asked that the review be delayed until the next revision. Well, the promised revision is now available and there are still a number of problems, some being downright bugs. All in all, this version of Basic does not warrant a buy recommendation, although it's not all bad. Read on.

Real Basic In Use

The programming environment of *Real Basic* has clearly had some considerable thought put into it. It is easy, almost intuitive, to use and a great improvement over the *ST Basic* environment. (How I despise those four screens!) The program, by the way, is not copy protected and works from a hard disk or ram disk.

When I received version 1.3, I put it in the disk drive and double-clicked on REALBAS.PRG. It came right up with no installation required. *Real Basic* is run as a GEM program, so full use is made of the menu bar and all the other GEM features we take for granted. I was able to begin writing programs immediately - there were no unpleasant surprises about little things like spaces either being required or not; there was no problem about case - upper or lower case worked just fine. There are a few example programs on the distribution disk that are valuable for reference purposes, especially for finding things like how to peek a two byte address (not described in the manual). Labels can be used with GOTO and GOSUB, a considerable aid to structured programming, as well as WHILE-WEND. There is good sound support, and an excellent piano rendition example program, direct access to alert and dialog boxes plus AES and VDI call support. An in-line assembler is included for assembly language subroutines.

After playing with some speed benchmarks, I tried loading a rather long engineering program that had been thoroughly debugged and works very well (Mini-NEC, an antenna analysis program). That is when most of the bugs and other difficulties showed up and my warm glow about a fine new basic turned into indigestion.

The Problems

Some of the things I don't like about *Real Basic* are annoyances, some are poor design characteristics, but a few are just plain bugs. First of all, there are a number of functions available from the function keys. Great. But LOAD and SAVE are not included on the function keys. Why not? These are major functions in any Basic.

Second, the manual is much too terse. CCL promises another manual, but the current one only describes the commands in as little space as possible and the editor is given equally short shrift.

Next, the number of floating point significant figures is set at seven and cannot be changed by the user. No provision is made for double precision, a necessity in many number crunching applications. *Real Basic* will not accept the scientific notation commonly used in most Basic's. In fact, there is no discussion at all of numeric types in the manual.

LPRINT using commas as column delimiters, e.g., 10 LPRINT,,"*****", produced an error message. Similarly, DEF FNFR(a whole bunch of math) produced an illegal address access error message. Yet this same function definition worked just fine under *ST Basic*, *GFA Basic*, and *DBASIC*.

I found that *Real Basic* crashes very easily, locking out the key board, so that only the reset or on-off switch will regain control of the ST. In particular, the immediate statement PRINT PEEK(1210#) crashed it. (This was one of my abortive attempts to read the internal clock for timing purposes. I finally found the answer in CCL's version of the Sieve benchmark - PRINT PEEKL(1210)).

Loading a long program from hard disk was much slower than loading the same program into *ST Basic*. As it was loading, the hard disk busy light would come on very briefly, then there would be a long pause while the interpreter digested what it had just gotten and then the cycle would repeat.

CCL has included a variant on the common RUN statement called FLY which is supposed to speed up program execution. Well, FLY is a bit FLAKY! Sometimes it causes the program to crash and sometimes not. When I used it on the random string test, the difference between FLY and RUN was almost insignificant, with RUN actually running ever so slightly faster than FLY in creating and sorting strings!

Since this review is far removed from a thorough beta-test, I am given to strong suspicions that there are other bugs and problems not as obvious as those I turned up.

Speed

CCL advertises the speed of *Real Basic*, and it is, by and large, quite fast. It did lose all the benchmarks to *DBASIC*, but as pointed out in an earlier review of *DBASIC*, that dialect of Basic is a bit strange, not using TOS at all, designed from the ground up for speed at the expense of all else. Relative to *ST Basic*, *Real Basic* beat it in all but the creation of 1000 random strings. Relative to GFA's interpreter, *Real Basic* lost the cosine squared, and string creation and sort tests. Note that *GFA Basic* was almost ten times faster at sorting strings than *Real Basic*. String sorting is an important application in any language and can clearly be done much faster than in *Real Basic*. *Real Basic* is pretty speedy in numerical applications, but nothing to write home about.

SPEED TESTS (Times in seconds)

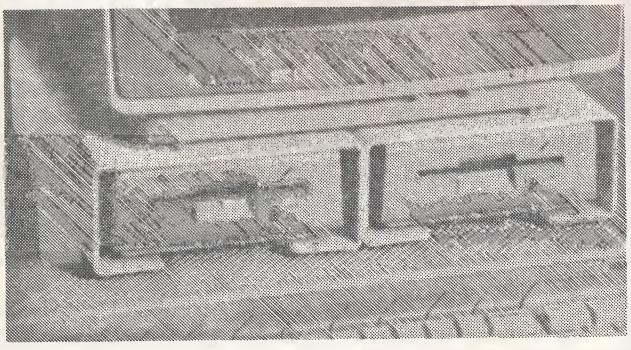
	A	B	C	D	E	F
Real Basic	33	7	4	89	225	22
ST Basic	38	251	31	69	304	105
GFA Basic	16	13	6	7	24	34
DBASIC	20	2	3	11	8	6

Test Description:
A: 1<=I<=10000, y=cos(I),x=y*y
B: BYTE Sieve, 10 iterations, n=2047
C: BYTE Calculation benchmark
D: Generate 1000 random strings
E: Sort random strings (bubble sort)
F: Print sorted strings to screen

Conclusion

Computer Crossware Labs has created a Basic with a lot of potential, but it still needs work. If CCL thoroughly debugs *Real Basic*, adds a few essential features, writes a thorough manual, and speeds up their string handling routines, they should have a first-class product. Until then, I can only be lukewarm about *Real Basic*.

[CCL, 516 Fifth Ave, Suite 507, New York, NY 10036 (212)-644-2591.]



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AWARDWARE

Everyone Needs a Pat on the Back

Review by Len Poggiali

Every so often a program comes along for which I have no use, but which is priced right and interests me enough so that I feel almost obligated to purchase it. Such a program is Hi Tech Expressions' *Awardware*.

For a list price of $14.95, Hi Tech provides its customers with two double-sided disks containing the *Awardware* program for both Atari 8-bits and the Commodore 64 on two of the sides, and graphics for each computer on the remaining two sides. Back-up copies may be made of both the program and the graphics disk, and for a limited time buyers can receive, with proof of purchase and a $2.00 postage and handling fee, a free second graphics disk from Hi Tech. This includes an aditional twenty graphics, as well as twenty more borders and a half dozen more seals.

Even $14.95 is a lot to spend on a product, however, if what one is getting for one's money is third rate. Unlike some other companies producing inexpensive software, Hi Tech's products started off being good and have been improving with each new item. Although their early releases (*CardWare, PartyWare, JingleDisk*, etc.) don't have the polish and sophistication of Broderbund's *Print Shop*, taken together (and one can buy three or four of these for the price of one *Print Shop*), they provide many more options and much more flexibility than does Broderbund's deservedly-popular software gold mine.

CardWare is billed as an "All-Occasion Card Maker and Animated Birthday Greeting Disk", while *HeartWare* is considered an "Animated Friendship Greeting Disk and Love Note Maker". *JingleDisk*, a Christmastime gem, unlike the others, focuses more on the animation and less on the card making. *PartyWare*, the most functional of the earlier products, allows the user to create practically everything needed for a celebration, including guest lists, decorations, a variety of cards, hats, and placemats. There even is a detailed explanation of suggested party games.

To my knowledge there is no other product for Atari 8-bits which does what *Awardware* can do. Naturally Springboard's *Certificate Maker* would be in competition if that product were available for Atari 8-bits. Apparently Springboard is planning a version of their *Newsroom*, so perhaps some day *Certificate Maker* also will be available to us. Until that day comes *Awardware* will do quite nicely.

What *Awardware* does is to help one design and print awards and other certificates; letterheads and memos; checks, tickets and coupons; ribbons; and a number of miscellaneous products of this sort. By following a series of menus in conjunction with reading an easy-to-follow 28 page booklet, the user should have no difficulty producing attractive hard copies of whatever he wishes within a very short time.

The first menu presents four major options, the first being "Printer Setup". Before going any further, the user must highlight this choice using the arrow keys, and then press the Return key in order to come up with the printer sub-menu. Here he should choose "Select Printer", which will bring up another sub-menu containing the names of a number of popular printers. After the correct printer is chosen, the printer driver may be saved to the *Awardware* disk so that this process does not have to be gone through every time the program is booted.

After returning to the main menu, a user wishing to make a printed award or such may choose either the "Create a Quick Award" or the "Create Awards and More" options. Although the former is slightly simpler to use, choices of features are limited. Most persons, I suspect, will prefer to go on to the the latter option.

Choosing "Create Awards and More" will call up a menu of specific award types from which the user can choose (awards, coupons, ribbons, etc.). This list includes an option for editing one's last award, something which might be quite useful for anyone giving multiple awards to members of a class or organization.

The manual suggests that the user cursor down to "Award/License" and press Return. Next he will be asked for a template number. Printed in the booklet are 60 different award templates as well as 50 other designs for letterheads, tickets and the like. For my first award (a momento for an outgoing school secretary) I chose Template 14, which was an 8x10 inch vertical design containing space for three lines of

text of medium-sized print, a center graphic, one line of small print, and a standard signature box and seal at the bottom. All of this could be surrounded by a design border if I wished.

Using the up arrow key, I made my choice of Template 14 and then pressed Return. The next screen contained a number of areas. In Area B on the top-left of the screen was a drawing of my template in miniature with outlines for the appropriate text, graphic, and signature boxes, and a border outline. On the right in Area A, I chose "Border" and pressed Return, and in Area B the border outline was highlighted. In the bottom-left of the screen in Area C, a list of my choices (approximately twenty) for my border design was presented.

After cursoring to an acceptable border and pressing Return, I was brought back automatically to Area A, where I continued with the process in order to select one of the fifteen graphics included. After choosing my graphic and having it saved by the program, I went back to Area A and selected "Text". Then I picked one of the five fonts provided and filled up the text lines with a heavy dose of praise and sentiment for the soon-to-be recipient of the award. Finding myself once again back in (you guessed it!) Area A, I picked "Signature" and was whisked off to Area C and greeted by a menu asking me where I wanted the signature line and the graphic seal positioned. I chose "Left Side" for the signature and a "Terrific Job!" graphic seal.

Now that my award was designed, I was ready to print it. I cursored from Area A to its neighbor, Area D, chose "Print" and pressed Return. The program then asked me to choose "F" for a final dark copy or "D" for a lighter one. Although the former takes more time to print, it is the more aestically pleasing of the two.

Before printing my design, the program saved a copy of it to disk (only the most recent design is saved) so that the printing of multiple copies would be facilitated. Then it began printing. The final result, while not up to professional standards, was more than adequate for an informal type of presentation.

Wisely the programmers' design allows for the use of either one or two disk drives. With a single-drive system there is a good deal of disk swapping required. Fortunately, it takes no more than fifteen minutes or so to make any award, unless one has difficulty making up one's mind.

I am certain that this program would prove invaluable to nursery and grade school teachers, scout leaders, and any other person working with children. Its uses for adult groups might be limited, though not necessarily.

Considering its many functions (one even can send an award on disk to somebody), ease of use, and low cost, *Awardware* represents a real value, perhaps even for the reviewer, who isn't quite sure what he's going to do with it.

Hi Tech will continue to support the 8-bits in the near future with the introduction of its most ambitious product yet -- *PrintPower*. According to the details supplied me by Valerie Herzog, the company's consumer support person, this Print Shop-like program will contain most of Print Shop's options and add a number of its own -- and all for the incredibly low price of $14.95. *PrintPower* will be compatible with *Awardware* graphics disks and *PrintPowerPak* (a companion program with a calendar function and more graphics).

[Hi Tech Expressions, Inc., 1700 N.W. 65 Avenue, Suite 9, Plantation, FL 33313]

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THREE FROM HI TECH

"Big Bird, Ernie and Grover Strike Back"

Review by Len Poggiali

A few years ago CBS Software published a number of Sesame Street educational programs in cooperation with the "Children's Television Workshop". Among the best of this cartridge-based software was an adding/subtracting "game" entitled *Astro-Grover*. Since the demise of CBS Software, the Sesame Street line has been generally unavailable. Now, thanks to Hi Tech Expressions, a company heretofore known for its very fine line of printer-oriented software (e.g., *Awardware*, *Cardware*, etc.), Grover, Ernie, and Big Bird have returned.

In addition to *Astro-Grover*, Hi Tech has brought back two other products for the 8-bit Ataris: *Big Bird's Special Delivery* and *Ernie's Magic Shapes*. Each title is handsomely packaged and contains a flippy disk with the Commodore 64 program on the other side. A set of easy-to-follow directions; individual Atari/Commodore quick reference cards; and a long, thin height measurement poster with colorful drawings of many of the Sesame Street Muppets also come with the package. At a list price of $9.95 each, these three products are a definite bargain.

Big Bird and Little Bird

In *Big Bird's Special Delivery*, the title character appears on a screen made up of various stores, each represented by a picture (e.g., a banana to represent a produce market). He is carrying a package with a picture (e.g., a banana) on it, which is given to Little Bird. Little Bird, who is controlled by the child player using the arrow keys, must deliver the picture-package to the appropriate store. After the user delivers the correct packages to the four on-screen stores, the program generates another four shops, and play begins again. In this way players are taught to focus on visual details, including shape and color.

Rather than asking the child to match the same items, a second, more difficult variant has Little Bird delivering a package with, for example, a picture of a pear to a store represented by a drawing of an apple. In this way children are tested on their ability to classify objects and to understand their functions.

Positive reinforcements come in the form of Big Bird nodding his head after a correct match is made, and Sesame Street lighting up after a round is completed. If a match is incorrect, Big Bird shakes his head, and then the player may try again for an unlimited amount of times until he/she gets it right.

The only drawback to this otherwise delightful program is that occasionally figures are difficult to identify. For instance, both my six-year-old daughter and I spent a good deal of time trying to identify a kite which happened to look more like a flyswatter.

Ernie's Magic Shapes

The setting for *Ernie's Magic Shapes* is a stage, framed above by a red arch and on the sides by blue curtains with red and green trim. Ernie, as a magician wearing a top hat and holding a wand, is off to one side of the stage, while a magician's table is on the opposite side.

Although there are six variations, the basic action for each is the same. Ernie begins by creating a colored shape or shapes above his head. Then he points his wand at the table and -- presto! -- a single shape appears. What the player does next depends on the variation. In the simpler levels the task might be to decide whether the shape on the table is the same as that of the one floating above Ernie's head, or if the colors match. Intermediate tasks include two or three figures; advanced ones present from about four to seven. In all cases the child must match shape to shape, or shape and color to shape and color.

If a correct answer is given (by keyboard input), Ernie nods, points his wand at the space above the table; that shape is moved there, and the next shape appears on the table. If a "no" is given when it should be a "yes", the shape disappears and another appears. If the input is a "yes" when the opposite is correct, Ernie will shake his head, and the player will be given a second chance. When all the figures have been chosen correctly, the exact shape or set of shapes is now both above Ernie and above the table. At that point a rabbit jumps from the table to the tune of a simple melody. After a few seconds the whole process begins again.

On the whole, *Ernie's Magic Shapes* does an admirable job of testing children's abilities to discriminate visually as to shape, size, and color, but the program does have some less-than-fatal flaws. While colors are easy to distinguish in the larger figures, often blues and greens tend to look the same in the smaller objects. The rabbit can become a nuisance after a very short while, as can the simple tune. With the music capabilities of the Atari 8-bits, it is a shame that the programmer did not take full advantage of these, particularly considering that this is a program for young children.

Still, all in all, *Ernie's Magic Shapes* is a well-designed and smoothly executed program suitable for children from ages three to about five. For my six-year-old the tasks are just a bit too simple even at the most difficult levels. This statement also holds true (though less so) in regard to *Big Bird's Special Delivery*.

Astro-Grover

Not so, however, for *Astro-Grover*, a program which still provides an occasional challenge for my daughter. Clearly the best of a good lot, *Astro-Grover* possesses excellent graphics, a better-than-average musical score, and a good deal more variety than either of the other two packages.

The first two games ("How Many Zips?" and "Beam That Number") deal with counting. In the former the player counts the number of Zips (hook-like figures) which are shot out of a spaceship. With each correct answer a house on Sesame Street is revealed. When five problems are solved, all five houses on the block are seen; an agreeable, multi-voiced melody is played; and Grover appears in the sky, dancing happily.

In the latter game the child is presented with a sky full of Zips. Whenever he/she presses the up-arrow key, a beam travels across the sky and comes to rest on a certain number of Zips. When that number corresponds to the number on a rocket ship, which is positioned on the right of the screen, the child presses the down-arrow key, the Zips go into the ship, and the rocket ascends part way up the screen. After three successful attempts, the ship takes off, music plays, and Grover dances.

"Adding Countdown" and "Take It Away, Zips" both present a similar scenario. A certain number of Zips appear; the child counts these, and they are placed on the launch pad. Then,

(Continued on page 29)

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PIECES OF EIGHT

By Len Poggiali

8-BITS AT A CROSSROAD

For the most part owning an Atari 8-bit has been a great pleasure. I must admit, however, that finding software in local stores never has been easy, and for the past year or two has been nearly impossible.

It used to be that I would stroll down the aisles of department stores and study software packages for other brand computers and rest assured that many of these same titles would be available for my 800XL, usually by mail order. Later I would call one of the handful of mail order houses I deal with, ask if a certain item was in stock, and what the price was. If the cost was reasonable, I would put in my order and wait a week or two for delivery -- inconvenient but acceptable.

In recent months, however, fewer and fewer software companies are publishing Atari 8-bit versions of their software titles. When one considers that many companies at one time used to design their programs with the Atari in mind and then convert those versions to other machines, one can only be distressed at how far the 8-bits have fallen.

Letter-writing campaigns from time to time have helped convince software manufacturers to consider converting their products to our machines. A year or two ago Electronic Arts buckled under to consumer pressure and converted many of its recent games. Most were not very good and did not sell well, but at least we were given the opportunity of owning some of the better ones (e.g., *Lords of Conquest* and *Chessmaster 2000*).

Software piracy has hurt us and so has Atari. Over the past holiday season, while Apple and IBM were spending millions on television advertising, and EPYX was handing out five of its programs with every Commodore 64 purchased, where was Atari? While Nintendo was capturing a lion's share of the video game market, what was Atari doing to convince buyers that an XE Video Game System was a better investment -- very little!

Atari didn't even do justice to its 7800 machine. Instead of taking the 2600s and 5200s off the shelves, Atari continued to distribute these. With four game machines from the same company, how could any consumer know what to buy? Also, by keeping the 2600 in circulation, third-party software companies had little incentive to produce cartridges exclusively for the more sophisticated 7800s (which will run 2600 cartridges but not vice-versa). As a result, companies wishing to appeal to as wide a market as possible produced 2600 versions which could run on both machines. EPYX's *Summer Games* and *Winter Games* for the 2600/7800 machines, for instance, aren't much better looking than your average 1982-vintage 2600 game. On the Nintendo they are gorgeous.

Winter Games is just one of the many programs I would gladly purchase, if an XL/XE version existed. In addition to admiring the beautiful graphics, the idea of competing in bobsled races and ski jumping without the risk to life and limb is quite appealing to me. If that proved to be a winner, I would also consider EPYX's other sports programs, including *California Games* and *World Games*. But EPYX has done few if any Atari conversions for years now. This is particularly ironic because the old EPYX (Automated Simulations) used to be a frontrunner in the 8-bit market (*Temple of Apshai* series, *Jumpman*, etc.)

Some of the newer software companies looked promising for awhile. Access published an Atari version of *Leader Board*, and Accolade produced an excellent arcade baseball game, *Hardball*. Both sold well; however, when Access came out with *World Class Leader Board* (trees and traps and real courses), and when Accolade published its football and miniature golf programs, and its innovative three-disk comic strip adventure (Comics), there were no Atari 8-bit versions.

Microprose, the company which produced two of my favorite military simulations -- *Crusade in Europe* and *Decision in the Desert*, as well as some excellent flight programs (*F-15 Strike Eagle*, for one), also appears to have left the 8-bit fold. Not only is an XL/XE version of *Gunship*, a popular helicopter simulation, nowhere to be seen, but one which I was particularly looking forward to -- *Pirates!* -- would appear to be permanently unavailable to XL/XE owners. This is a shame because the reviews of *Pirates!* printed in Commodore and Apple-specific magazines and in the generic computer periodicals mostly have been unqualified raves. Unfortunately, in order to

own this strategy game of plundering, trading, negotiating and forging alliances, one would have to own a non-Atari brand 8-bit computer.

To make matters worse, Strategic Simulations, a company known almost entirely for its comprehensive selection of combat simulations, and heretofore a faithful XL/XE supplier, has precious few of its new titles slated for 1988 production. Even more disturbing is the news that Infocom, the publisher of the strongest line of interactive computer fiction and a company long known as a staunch 8-bit supporter, will no longer be producing its newest titles for our Ataris. In a recent issue of The Status Line, Infocom's in-house publication, the author of an article entitled "What about Atari 8-bits and the Commodore 64" stated the following:

> 80% of the sales of our smaller games -- those that run on the C-64 and the Atari -- are to people whose machines can support much larger games. Since we have the capability of doing that much more for those machines, we feel that to not do so would be shortchanging the vast majority of our constituents.

The author goes on to say that two new titles -- *Border Zone* and *Sherlock: The Riddle of the Crown Jewels* will be available for the C-64, but because of memory limitations, no Atari versions will be available. Apparently Infocom has not been told that XL/XE computers have at least 64K.

Fortunately the 8-bits have been around for a long time, and there are enormous amounts of programs readily available, and others which require some creative searching in order to find. Admittedly most early 1980's-vintage programs are a bit (or a great deal) dated in 1988, but many still retain a certain freshness and challenge lacking in some more recent products. Of course there certainly still are a number of more recent entries into the 8-bit market worthy of our time and our dollars.

If the absolute last new 8-bit software title were published today, I for one would still have enough software to keep me busy and entertained for a number of years. Unlike the Coleco Adam and Mattel's Aquarius, which became orphan computers almost before they were manufactured, the Atari 8-bits have a rich and varied history, with the software to prove it.

Even so, it is unfortunate that the 8-bits might end up being retired in middle age due to this current lack of new software support. When one considers that in the area of educational and entertainment software the two machines which seem to be receiving the greatest amount of support (Commodore 64 and the Apple IIs) are both in many ways inferior to the Atari 8-bits, then that even compounds the frustration most serious 8-bit users feel.

Perhaps a rebirth is in the offing. If sales of the new compatible XE Video Game System pick up, then maybe we might witness a surge of new titles (albeit, on cartridge). If, however, the new game machine goes the way of the 1200XL and other Atari losers, then the end of an era will be at hand. For Atari 8-bit owners, 1988 will be a crucial year.

THREE FROM HI TECH (Continued from page 27)

depending on which game is being played, either more Zips appear, are counted and placed alongside the previous set ("Adding Countdown"), or some of the original Zips move away from the others, are counted, and disappear ("Take It Away, Zips"). The child then counts the total number of Zips, or adds or subtracts the numbers which are displayed on either side of the launch pad. In this way a younger child, who cannot add or subtract numbers, may solve the problem by counting, while an older child may do it in the conventional way.

The object of the final and most difficult game ("Sum Up, Sum Down") is to combine each of the three numbers found in three beam bases in such a way as to add up to the number displayed in the Zips' ship. After the player completes three correct answers, the ship will fly home.

Astro-Grover is one of those nearly perfect educational programs. It helps teach children basic skills while providing enough variety to make the task interesting; excellent graphics and music to make it fun; and appropriate challenges and positive feedback to lessen frustration and to provide the user with a sense of accomplishment.

Hi Tech Expressions has done the Atari 8-bit market a real service by reissuing *Big Bird's Special Delivery, Ernie's Magic Shapes*, and *Astro-Grover*. Atari owners, who have children between the ages of three and six, would do well to support this company by purchasing one or more of these three very fine programs.

(Hi Tech Expressions, 1700 N.W. 65th Avenue, Suite 9, Plantation, FL 33313.)

ADVENTURES IN THE MAGIC SACDOM

By Jeff Greenblatt

VERSION 5.9 and HFS-PART I

On February 6, 1988 I received version 5.9 of the Magic Sac software. This version was distributed to all registered owners of the Translator. Along with this latest version the disk contains several new releases of the support software as follows:

DRIVER5 .PRG	Version 5.9
HDSTATS .TOS	--
MAGICHD .PRG	Version 2.2
MOVER .PRG	Version 1.5
TRANSIST.TOS	Version 2.0
JUSTGO .PRG	Version 5.9

For those of you who don't own a Translator, contact Data Pacific for the upgrade at a nominal fee. You will definitely want to use version 5.9, even if you don't have a Translator. Read On!!

Version 5.9 among others, has one major feature which is of great benefit to all Magic Sac users. It can use the Hierarchical File System (HFS) for organizing a disk. When Apple released the Mac Plus it came with 128K ROMs and also introduced SCSI high capacity Hard Disk capability. With the advent of these type of Hard Disks, the original Macintosh File System (MFS) had a tendency to choke as a disk was filled with more and more files. MFS on a real Mac appears to have a limit of approximately 100 files (300 on a Magic disk), and folders are not really folders as ST owners are accustomed to.

A folder under MFS merely concealed a file. That is, you could not have two files with the same name on the same disk (or a partition), even if one of the files is in a folder. An annoying feature of MFS is the way a File Dialog Box behaves. Since folders are not real, all files on a disk are displayed which causes the user to scroll through the entire disk contents to access a file. On the other hand, if you want to save a new file to a specific folder from a File Dialog Box, you can not do this under MFS. Once you have saved the file, you have to move it into the folder from the desktop.

HFS solves all these problems and adds some very convenient features to aid the user through folders and files. For one thing, with HFS, you can have the same file on the desktop and in as many folders as you have, all on the same disk. Additionally, since folders are real, you can have folders within folders, and on and on.

Dialog Boxes are a real pleasure to use with HFS. For instance, if you are deep into folders within folders, you can switch randomly to any folder you wish without stepping back through the previous folder by just pointing the mouse to the folder name above the dialog box. Another interesting feature is that due to the limit in the size of a dialog box, only a few file or folder names can be displayed at any one time. To get to a specific file or folder in a dialog box, you can type in a character that begins with the file or folder name and you are instantly at all files or folders whose name begins with the character.

One drawback of HFS is that some software applications require the print driver and the clipboard file be in the same folder with the application to run properly. *Superpaint* comes to mind!! This is because it can not find these files when they are hidden in another folder, even the System Folder. So, depending on how you set up your files within folders you may be forced to have duplicate print drivers and clipboard files in multiple folders. It's best to keep these type of applications in the same folder. This method also allows the applications to share a common clipboard, so that you can cut and paste between applications.

Another advantage of HFS is that it accelerates moving in and out of the desktop, especially when there are numerous files on a disk or in a hard disk partition.

Since the original Mac with 64K ROMs couldn't use HFS, Apple released a file called Hard Disk 20 which allows the original Mac and the Magic Sac to use HFS. Hard Disk 20 Is an INIT file that automatically loads itself in on startup, just like a file in a AUTO folder would in TOS. The beauty of Hard Disk 20 is that it even works with floppy disk based systems.

One word of CAUTION!! Apple has confirmed that beginning with with Finder 5.4, they removed the system patches from System 4.0 to eliminate the bugs in the 64K ROMs. So, do NOT use this finder/system combination or any of the latest ones, including Finder 6.0 with

Current Notes ST Library

These disks contain Macintosh programs for use with the Magic Sac Cartridge on the ST. Disks are in Magic format and all work with the MAGIC SAC.

M 0: MAGIC SAC. Version 4.52, (or the most recent ver) of MAGIC program.
M 2: TELECOM DISK No.1. BinHex 5.0, Free Term 1.8, FreeTerm.Doc, Kermit, PackIt III (V1.3), StuffIt 1.0, TermWorks 1.3.
M 3: UTILITY DISK No.1. DES, Font Doubler, MacDump, Mini Finder, PackIt III (V1.3), Reverse Screen 1.0b1, RMover, Scan, Set File. SLICER. Version Reader 1.1, Write Stream.
M 4: GAME DISK No.1. Backgammon, Bash Big Blue, Curves, MacLuff, MacYahtezee, Maze 3D, Meltdown, Missile Command, Munch, PepsiCas, Smile, Snow, Solitaire, Space Bubbles, Vax Runner II.
M 5: DISK LIBRARIAN. Disk Librarian Ver 1.82A. Disk Librarian Doc, Librarian Short Doc. Contains complet listing of CN MAGIC LIBRARY.
M 6: GAME DISK No.2. Ashes, Black Box, Destroyer, HexPuzzle, Killer Kalah, MacPoly Demo, Office Attack, Point Symmetry Demo, Snake, Solitaire, Trophy List, Wall Game, Wheel.
M 7: GAME DISK No.3. Ashes, Break the Bricks, Deep Ennui, Go, Mac Gunner, MacBugs, MacCommand, MacYahtzee, Wiz Fire 1.1
M 8: DESK ACCESSORIES No.1. 3DTTT Game, Art Thief, Ascii, Bagels Game, Big Ben, Calculator, CopyFile, DA Tester 1.5, Delete File, Desk Acc. Tester, DeskZap 1.2, Eject&Reset, Extras, File Hacker DA, File Tools, Font Grapper+, Font Grapper3, Hex Calculator, HP 12c, MemScan, MemWindow, MerriMac BlackJack, miniWriter, MockTerminal, MockWrite, Moire, MW Count, Other 3.0, Puzzle, Reader, Rubik's Cube, Sampler, Scrapbook, Scientific Calculator, SetFile 3.3, SkipFinder, TheBox, Tiler 1.5, Trails, Transfer, TrapList, Utils, Word Count, Zoom Idle.
M 9: UTILITY DISK No.2. Bind Icons, Change Appl. Font, Convert Desk Acc., Desk Accessory Mover, File Hacker, FontDoubler, Index, MakeScreen, MicroFinder, PurgeIcons, RamAStart 1.3, REdit, ResEd, SelectPaint, Show Version, User Interface Demo.
M 10: GRAPHICS DISK No.1. Amy, Artisto, ball demo, Big Ben, Brooke, Bugs, Curves, Display Message, Dragon, Fighting 51, Fourth Dimension, GARF, HotSex!, Liar's Club, Living Art, Max Headroom, Moire 3.0, Nightmare, Optical Illusion, Paint Grabber, Painter's Helper #1, Pattern*, Pisces, Rotations, Saddle, The Fourth Docs, ViewPaint 1.5.
M 11: PRINT UTILITIES. Coventry-12, Disk Labeler, Fast Eddie, Font Mover, Ink, MacWrite 4.5 to Text, miniWriter, MockWrite, Pica-10, ReadMacWrite, Walla Walla-9.
M 12: MACBILLBOARD. Chipmunks, Donald & daisy, Goofy At Bat, Announcement, Babe Ruth, Carrotprint, Classic illusions, Escher, Escher Hands, MacBILLBOARD (MacPaint clone), Max, Mickey and Minney, mm, Quick Tour, T-Shirt.
M 13: FONT DISK No.1. Akashi, AlgBlurb, Algebra, Athens, Boxie, Dover, Geneva, Hood River, ImageWriter, LED, London, Los Angeles, Luxor, Mars, Monaco, Park Ave, Pica, Ravenna, Rome, Runes, San Francisco, Seattle, Steel Brush, Ultra Bodoni.
M 14: FONT DISK No.2. Bookman, Courier, Coventry, Dali, Genevaa, Hebrew, Manteco, Shadow Box, Sri Lanka, Times, Walla Walla, and font display 4.6 w/docs.
M 15: GAME DISK No.4. Alice, Amps 3.0(B2), Bricks, Canfield 2.0, Iago, Lets Get Tanked!, MacHeads, Nim, Space Attack, Third Dimension.
M 16: FONT DISK No.3. About Lachine, Alice, Avante Garde, Berkeley, Broadway, Camelot, Cartoon, Centura, Chancery, Eon, Exeter, Fallingwater, Fantaste Key, Fantaste!, Future, Ham, Helvitica, Hollywood, Lachine, Lineal, Madrid, Pittsubrg, San Quentin, Silicon Valley, Stencil, Unicol plus DAFont2.da and SysFonts.da.
M 17: DUNGEONS OF DOOM 4.0. Graphic adventure game.
M 18: DESK ACCESSORIES No.2. About Popup.txt, Alarm clock, Art Grapper+, Calculator+, Choose Scrapbook+, DA File, DA Tester 1.5, Disk Labeler, DiskInfo 1.45 + SICNs, Explorer, Gone Fishin', Hex Calc, Label Maker, MemWindow, MiniWRITER 1.34, Multi-Scrapbook, MW 4.5 Counter.DA, Popup 1.0, ProCount, ReadiPrinter, Ruler, SFstartup 1.0, Skipfinder 6.1, Sleep, Stars 1.6, Stars II, Sysfonts, TeaTime, Timer.
M 19: PINBALL CONSTRUCTION SET GAMES. Pinball Construction Set Player plus 12 Games: Apple, Black Hole, Face, KalinBall, Madonna, Minute-Mag, Patchwork Mess, Phantom, Pure-Gamme, Samurai, The Royal Pain, Wizards Lair.
M 20: GAME DISK No.5. Chase'Em, Crystal Raider, Daleks, Golf MacWay, Kill File, Kill, King, King.MacWrite, On-The-Contrary, StuntCopter1.2.
M 21: GAME DISK No.6. Guess, Hacker's Contest, Hot Air Balloon, Match, Ramm1.0, Third Dimension, Trick-Track, Utaan Attack, Zero Gravity.
M 22: GRAPHICS DISK No.2. BlowUp 3.0, BlowUp Notes, CalendarMaker 2.2.1, Dynamo, Graphic, MadMenus, Math21, Rays, Simutree, Spiro, Tree, Vanlandingham.
M 23: VAMPIRE CASTLE. Graphic adventure game.
M 24: DEEP ANGST. Graphic adventure game. 1 Mb ST only.
M 25: GAME DISK No.7. Billiards, Cross Master Demo, Flash Cards, Hangman-8.0, MacLuff, Master Guess, Safari 1.0, Venn.
M 26: GRAPHICS DISK No.3. 3D Sketch, AniRama, Bin/Graphics, Brownian Motion, Control, Fractal Contours, Fractals, Icon Collector, Julia, MakePaint, Melting Clock, Small View, ShapeArt, StarFlight, Window Demo.
M 27: UTILITY DISK No.3. Browse/Shazam!, Clocks: analog & digital, Edit, FEdit 3.0, launch, lazymenu, Magic Beep 1.0, Menu Editor, microFinder, Quick Dir, Quick Print, RamStart 2.0+, Road Atlas, ShrinkToFit, SicnEdit, SortMenu, SortMenu Code, SuperFinder 4.0, TabsOut, Unpit, WayStation.
M 28: RED RYDER 7.0. Red Ryder 7.0, Red's 7.0 Stuff, RR7.0 Macros, RR Docs.
M 29: PCS PLAYER No.2. Pinball Construction Set Player plus Games: Circus Circus, D &D , Diadora, Max, Merlin, Modern Mistress, Queston, The Royal Pain, Twilight Zone, Whazit.
M 30: GAME DISK No.8. Bowl-A-Rama, MacTrek 1.1, Mystery Box 1.0, Shots, Star Trek Trivia Quiz, Window Blaster 1.0.
M 31: BLACK WIZARD. Graphic adventure game by Richard Loggins.
M 32: FONT DISK No.4. Canberra, Chicago, Humanistic, Music, New Dali, Palencia Application, Palo Alto, Pioneer Shadow plus F/DA sorter and Font Tester.
M 33: CLIP ART No.1. AirCraft, Business, Car Logos, Cars & Trucks, Clip Art Demo, Disney, Eyeballs, Flowers, Misc, Seasons, Trees1, Trees2, ViewPaint 1.5.
M 34: GAME DISK No.9. 1000 Miles, Asteroids, Cairo ShootOut!, Donkey Doo, Duck Hunt, Pente 1.0.
M 35: FONT DISK No.5. Beehive, Beverly Hills, Boise, Chicago, Courier, DeStijl, Ham, Happy Canyon, Helvitica, Mod. Chicago, Old English, Square Serrif, Sri Lanka, Worksheet.
M 36: CASTLE OF ERT. Shareware graphic adventure game.
M 37: MAC-A-MUG PRO DEMO. Version 1.0, Create your own mug shots by combining a variety of different facial features.
M 38: VIDEO WORKS PLAYER #1. PD player for Video works animated screens. Includes 11 movies.
M 39: DEMO DISK #2. Demos of Anatomiser (learn human anatomy), DeskPaint (desk acc MacPaint clone), and SuperPaint (graphic • program with both MacPaint and MacDraw features).
M 40: HACK, Version 1.03. Game is similar to Rogue, includes manual with full docs.
M 41: RADICAL CASTLE. Graphic/text adventure game.
M 42: FONT DISK No.6. 15 new fonts: Berlin, Boston II, Courier, Dorza, Highwood, MicroBoston, MiniBoston, New York, Palo Alto, Sparta, Stiletto, Symbol, Tatooine, Venice, Wartburg.
M 43: UTILITIES No.4. DiskDup+, MacSnoop 1.03, RamDisk+ 1.4, ResTools 2.01, Oasis 2.01 (HFS), Font Librarian (HFS), Switch.
M 44: FONT DISK No.7. 18 new fonts: 42nd Street, Aldous, Art Deco, Ascii, Blockbuster, Border, Clairvaux with docs, Coptic, Deep Box, Ivy League, Klingon, Las Vagas, Little Box, Madrid, Memphis, Minneapolis, Rivendell, Spokane.
M 45: GAME DISK No.10. Blackjack 4.0, Gunshy 1.0, Humpback, New Social Climber, Panic, Puzzle 1.0, Star Trek Trivia Quiz, Video Poker.

Order from Current Notes Library, 122 N. Johnson Rd., Sterling, VA 22170. $4/disk plus $1/(6 disks) for shipping.

System 4.2. You may find that they work with the Magic Sac, but they behave erratically and crash unpredictably. Apple has also confirmed that Finder 5.3 with System 3.2 or Finder 5.4 with System 3.2 are the best combinations to use with 64K ROM machines.

If you need a copy of any of the files I mentioned in this article, the following is available in the Macintosh RT library of GEnie:

File No. 7440 Hard Disk 20
File No. 7573 Finder 5.4/System 3.2
File No. 1769 System 3.2
File No. 1770 Finder 5.3

Next month, in Part II, I will discuss the use and set up of HFS on a floppy system, and a hard disk system.

NEW LIBRARY DISKS

This month two new disks have been added to the Current Notes Magic Sac library. Here are the titles and what they contain:

#M44: Font Disk No. 7, contains 18 new fonts in assorted sizes. They are 42nd Street 36, Aldous 12-18-24-36, Art Deco 9-12-18-24-36, Ascii 18, Blockbuster 36, Border 12, Clairvaux 2.2 (9 to 48 pt) with docs, Coptic 10-20, Deep Box 36, Ivy League 18, Klingon 24, Las Vagas 36, Little Box 18, Madrid 18-24, Memphis 24, Minneapolis 18, Rivendell 14 and Spokane 18.

#M45: Games Disk No. 10, contains 8 new and fun games. Here are the titles and a brief description of each.

Blackjack 4.0 is a new and improved version of this old standby with super graphics. Also included on the disk are full documentation and a description of the changes in version 4.0, all in Macwrite 4.6 format.

Gunshy 1.0 is a super fun game which is very similar to *Shanghai* by Activision. In this game you have to remove all the stacked matching tiles to win. The tiles have icons on them from different Mac software.

Humpback is a very unusual game which involves moving your animated camel through the eye of a needle. Enough said about this one.

New Social Climber is a fun game, very similar to *Elevator Action.*

Panic is a variation on space invaders except the aliens do not come at you in waves; they attack randomly.

Puzzle 1.0 is an unusual game in which you take your favorite Macpaint picture and using the program, you break it up into little jigsaw puzzle pieces. After you have done this, then you try to put the picture back together again. This program comes with two puzzles already on the disk ready to frustrate the heck out you.

Star Trek Trivia Quiz is for Treky Fans. If your not sure you're a Treky, try this quiz to find out. I couldn't answer half of the questions this program throws at you.

Video Poker is lots of fun and has excellent graphics, enough said.

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COMPUTER PROTECTION WITH MOV'S

How to Use MOV's (Metal Oxide Varistors) for Surge Protection

by Harry Steele

A lot of attention should be paid to protecting computers and other electronic equipment against costly damage from power line transients. Voltage transients include surges of voltages above the specified normal, voltage sags below, and instantaneous spikes that leap far above the normal value.

The solution to this problem is to install a device called variously a "Voltage Spike Protector", "Surge Suppressor", or "Transient Eliminator". These devices are available commercially at prices from $20.00 to $100.00 and are based on a component called a metal oxide varistor (MOV).

MOV's are voltage dependent non-linear devices. When a voltage lower than its conduction threshold is applied across it, the MOV appears as a non-conducting open circuit. But if the applie voltage becomes greater than this set point (when a transient hits), the MOV begins to conduct, clamping the input voltage to a safe level. In effect, the MOV absorbs the transient and dissipates the energy as heat.

The following descriptions explain how to wire the MOV's into either a multiple outlet strip or the normal wall outlet.

Parts:

3 - General Electric V130LA10A MOV's or equivalent. (Radio Shack part #276-570) light duty. (Radio Shack part #276-568) heavy duty.

1 - Power outlet strip that can be readily opened, or, 120 V AC "duplex outlet" with ground.

POWER STRIP MOD

Do NOT attempt this on a power strip that is plugged into the wall! Unplug the power strip first!

Open the power outlet strip to obtain access to the wiring between the sockets. There will be three wires connecting the outlets to one another and the power cord. They will generally be colored black, white, and green (hot, neutral, and ground). Remove sufficient insulation from the wiring between the sockets so that the three MOV's can be soldered across the three pairs or wires as follows:

(1) green and black
(2) green and white
(3) black and white

It may be necessary to insulate the solder connections and the MOV's with electrical tape or insulating tubing. Replace the cover and the job is completed.

OUTLET BOX MOD

Do NOT attempt to work on the outlet box with a "live" circuit! Turn off the circuit breaker first!

Remove the wall plate. Remove the two screws that hold the outlet to the box. NOTE: Insulating tubing will be necessary on the MOV leads to prevent shorting. Loosen the screws as required and connect a MOV from the white lead to the black lead. Connect another MOV from the black lead to ground. The third MOV goes from the white lead to ground. Carefully dress the MOV's against the outer shell of the outlet. Examine your work carefully for any exposed wire that may produce a short circuit. Replace the outlet into the wall box. Restore electricity.

You have provided outlets with surge and transient protection for a cost of less than $5.00 each, with the assurance that these transients and surges can be "clamped" within a response time of less than 35 nanoseconds; more than sufficient to save your valuable equipment.

References:

(1) Ciarcia, S. (1983), BYTE 8 (12).
(2) Kanter, E. (1985), Computer Digest, Oct.
(3) Natural Toxins Research Center Bulletin #2907

[Reprinted from the "A-Bug", the newsletter of the Boston Computer Society for Atari Users.]

IT'S A SMALL WORLD

By Dave Small, (c) 1988

SO WHAT'S POURNELLE REALLY LIKE?

Lots of people read Byte and Infoworld. In both of those journals are columns by one Jerry Pournelle, about computing. Putting it mildly, he never hesitates to take a controversial position.

Many more people read science fiction. For them, the name is pretty familiar. Possibly his best-known efforts are co-authorships with Larry Niven; "Lucifer's Hammer" is one you might remember, about a comet hitting the Earth. His latest are a new "Janisseries" book (book 3 in the series), "Footfall", and "The Legacy of Heorot".

Jerry was one of the first to write about the Magic Sac, and was one of the big reasons it was ever finished and brought to market. We had no money to advertise the product, or let people know it was even possible to run Mac software on the Atari. Partly because of Jerry's columns, many people contacted us, and we knew there was interest; we went ahead and finished the product. Over time, he's received Magic Sac updates, and I run into him a lot at computer shows, so I've had a fair amount of contact with the Pournelles.

And whenever the topic of Pournelle comes up (it's a sure-fire topic among computerfolk), when the person I'm talking to finds out I know Jerry, they ask me: What's he really like?

So I thought I'd tell you.

First, in an industry where there are very few unique personalities, where conformism is required, Jerry stands out like color in a black and white film. At a computer show filled with Suits, such as the West Coast Faire in San Francisco, he comes dressed in a camoflauge African bush jacket, with a "Soldier of Fortune Magazine" tote bag.

This raises a few eyebrows, to make an understatement. While I'll try to avoid politics here, just realize that in the San Francisco-area computer publishing industry, there's a good-old-boy network who have a definite political stance. If you've read "Hackers", the politics of the first microcomputer innovators are detailed pretty well; they're to the left. I remember an article in a recent Dr. Dobbs computer magazine on the morality of even programming for an outfit associated with the military -- the writer would only work on defense-related contracts if half his salary was donated to peace movements.

To disagree with folk like this is generally writer's suicide. There's plenty of people of agreeable (or no) political persuasion that are hungry to write columns. There's a certain well-enforced conformism at work.

So, first on your list of what's Jerry like, write, non-conformist.

Second, talking with Jerry the first time is a real shock.

If you meet Pournelle, you're in a for a shock. He writes his columns, you see, in a friendly, warm, intimate style, a sort of "Your best friend looks at computers". So, you ask, who's this guy with the Byte magazine badge and the camo bush jacket... and why is he yelling at me?

What you don't know at this point is that Jerry spent time in Korea with an artillery unit, and his hearing was damaged by it. So if he talks loudly, it's because he doesn't know he's doing it.

Another thing that's rather striking about Jerry is his eyes. I've rewritten this section several times trying to describe them, and failed, so forgive me if this seems a little trite -- I don't know exactly how to describe them. I've seen eyes like them just a few times. Once is on Robert K. Brown, a name that's probably not going to mean a lot to you. (Real helpful description, right? I know, I know...). The second was on a very good hunter I once spent some time with. The third, and last, is on my father-in-law, who spent much of his career test flying SR-71's (the Blackbird). They're the sort of eyes you get if you've spent time outdoors in the sun squinting at things, or if you've spent hours looking at instrument panels for the thousandth time.

Having those eyes check you out is a little like being mentally dissected; I recall the first time I showed the Magic Sac to him, he was looking for a Mac hidden under the table ... I think.

Third, Jerry, and I quote, "Doesn't suffer fools". I watched a couple of True Believers in San Francisco go try to lecture him; I believe

the subject was nuclear weapons. They had that dedicated, terribly sincere look you find on the faces of people selling books at airports.

I think these people lasted about a minute.

If you disagree with Jerry, you'd better make damned sure you have your base facts and reasoning straight, or you'll get shredded. Remember, he works on "hard" science-fiction books, which are read by SF fans who just ache to poke factual holes in a story. ("Well, the problem with 'Lucifer's Planet' is a planet of that size couldn't possibly support an oxy-nitrogen atmosphere because the gravity curve for molecular attraction is all wrong.") I'm sure you've met people like this.

With someone who is used to checking his facts and reasoning very carefully, before holding it up to public scrutiny, you just don't give emotionalisms or sloppy thinking. The eyes look through you, the voice gives you a quick summation of why you're wrong, and you end up sort of feeling like a third grader who's blown his multiplication tables in front of the schoolteacher.

This isn't exactly the Dale Carnegie school of public relations. Theoretically he should Gently Listen, state his beliefs, listen to theirs politely, thank them for taking his time to lecture him, and leave. What he will do is ask a couple of pointed questions to find out if you've thought the issue through, and if not, you're dismissed but fast. I've come to see this abruptness as necessary for a person like Jerry, who is in a very public position.

He gets all sorts of phone calls at weird times of the day from computer press relations people, who are determined to hype him on their latest product and wangle a review. If you've ever had an insurance salesman call you repeatedly, you know just what this is like. Anyway, he has all sorts of True Believers that he's offended by not liking their Favorite Product, who are determined to set him straight. And remember, all the computer things he does are his hobby; he's first and foremost an SF writer, and that means lots of uninterrupted hours of quiet time, without the phone ringing.

After getting a few stupid phone calls at 7 AM (well, on the East Coast it's 9 AM. Why aren't I awake?) after late-night hacking sessions, I finally got an unlisted number, so I have a lot of sympathy for Jerry.

So for him, the brusqueness is a natural defense. If you take the time to get past it, show him you're not an idiot or out to Convert him to your cause, he mellows out and becomes a pretty good person.

This happens regardless of your political persuasion. Jerry regularly reprints articles in the collections he edits from people who disagree with him politically. But that disagreement, you'll find, is from people who know their facts and who reason well.

Fourth, Jerry doesn't like hype or Religious Causes. Take for instance the Macintosh. It was released with the most hype and public relations work ever done for a personal computer. Lots of people trotted out and bought a computer with a whopping 128K of memory, tiny screen, and disk drives mostly taken up by System files because of this hype. Certain magazines started up just for Mac owners. The pressure was awesome. Remember the "1984" commercial during the Super Bowl?

I confess to being one of these useful idiots... so I endured Summer 1984 with zilch Mac software, like everyone else, and a lot of hype. I remember MacWorld, as a for-instance, running reviews of products that simply did not exist. Finally the 512K board came out, and Microsoft Excel, and the thing was at least useful.

Jerry earned the wrath of many Mac True Believers by labeling them "MacTribesmen", and pointing out there wasn't any software for the machine, the screen was tiny, it had little memory, and so forth.

It's easier to convert someone to a new religion than to convert a computer True Believer, though, and Apple has always had a large share of blind loyalists who buy (note the word "buy") the counter-culture image associated with it. Then they buy ("buy") the Mac magazines, buy ("buy") the Latest Hot Mac Software, and so forth. Folks, it's a very profitable business, this selling of counter-culture.

Eventually, when the Mac got enough memory and disk drives to be somewhat usable, Jerry relented and said that Mac was useful.

When Jerry wrote about the MacCartridge, as our Magic Sac was first called, he was swamped with essentially hatemail from MacTribesman, who were outraged at what had been done. How dare he even write about it? Now, you're getting some idea "how he dare".

Fifth, Jerry is totally unafraid of unpopular causes or of making controversy. His "Soldier of Fortune" totebag is one such example. I remember once I dared to wear an SOF T-shirt at the West Coast Faire in San Franciso, just for fun. I do mean the "just for fun" part; the next day, I wore my Gary Hart "I was there the first day of the campaign" T-shirt my partner gave me. (He was a big Hart supporter

way back when.)

Oh, but that SOF T-shirt... I got lectures on politics there. I remember one fellow saying, "Murderers! They're all Murderers!" in the middle of the show. It was really strange.

Whispered among the zealots is a rumour that Pournelle once wrote for SOF. To do this is to be instantly condemned by the True Believers, as I found out, as a "Murderer!", or the scornful, "Mercenary!".

Well, the rumour is true. But before you recoil in horror, realize that Jerry is heavily into wargaming and computer wargames, and tactical/strategic theory; you'll see a lot of coverage of said games in his Byte column. SOF is mostly hype; the "Magazine for Professional Adventurers" image lasts as far as the cover. What's inside is pretty straightforward... how to clean your rifle... how to sharpen your knife... "I was there in Vietnam"... just like about ten thousand other military-oriented magazines. It isn't any big surprise Jerry would write for them about strategic theory, any more than someone like Chris Crawford writes about his "Eastern Front" wargame in a wargaming journal. So much for the hype. (He doesn't write for them anymore, by the way; he's too busy doing other things).

Sixth, Jerry is decidedly un-trendy in his feelings of loyalty. If you take the time to get to know him, and be a friend, then he's very loyal to you. This is looked down on as old-fashioned among circles where what's Trendy counts, where your friends are people who Think the Right Thoughts. I see a whole lot of that in the computer industry, which is filled with conformism and peer pressure, be it the popular Language Wars (Pascal vs. C vs. Basic), Computer Wars (Mac vs. IBM), or Political Wars (fill in the blank).

But I saw Jerry's personal loyalty in action recently. Jerry had contracted with an ST hacker named Alex Leavens to write a reading program for Jerry's wife, Roberta. Alex made a good start, then slacked off. Alex was having a lot of problems at the time which took away his working time.

Many months later, Alex still hadn't finished it. I thought for sure that Jerry would drop Alex and get someone else to finish the project.

To my surprise, he didn't. He stuck with Alex, who finally finished the reading program, better-late-than-never. That was probably what finally brought Alex out of his problems; it would have been easy to just drop Alex and move on, but Jerry didn't.

Or take Jerry's wife, Roberta. Roberta is a, well, fiesty redhead (who wouldn't mind at all being called "fiesty"!, or I wouldn't dare), who has had a distinguished career teaching kids in the LA school system how to read. Her kids are the ones labeled "unteachable" by the system, with pounds of paperwork on why they can't be taught to read. Maybe they're "dyslexic", or "problem children".

Roberta's approach is to throw away the paperwork and teach the kid how to read. She has a 100% success rate so far. This is the sort of loyalty I'm talking about; there's a lot of kids who can read because of Roberta.

Her technique, put into a program, is what Alex was working on. By the time this is printed, it will (hopefully) be available. I'm looking forward to seeing it.

So, which computer did the Pournelles pick to do this on? Why, you say to yourself, the Apple II of course... that's the one Schools Always Use. "Everyone Knows That". But no; Jerry and Roberta picked the Atari ST.

One more example comes to mind. Barbara Clifford, who's now at Infoworld, helped out a good deal with the latest Janissaries book as an editor. Normally this is something editors do as part of their job; Jerry made sure she got credit on an opening page.

Seventh. Jerry *likes* the Atari ST.

The ST has always been a computer whose potential is never quite realized, but is so obvious that it can't be missed. It's got enough memory, enough CPU, enough color and resolution to be doing some serious things. It's more of a "chicken and egg" question in getting developers to write software for it, when there isn't a big installed base, than any particular machine bugs which have held the ST back.

To have brought up the reading program on the Apple II would have required running it in monochrome (since a lot of schools don't have Apple color monitors), squeezing it into 48K of RAM, and not using a mouse. In short, it would have compromised the program in a big way.

So they went with the ST.

Eighth. Those of us who've ever been to a Pournelle party know that Jerry has no problem kicking back and partying. Now you've got to understand that at these parties, lots of press people just love becoming Pundits. It's Ego Central. They gather a group around them and lecture. You hear about OS/2 or the Mac philosophy or Bill Gates or whatever.

I think "dull" is the word I'm looking for.

Instead, Jerry has your basic wild good time. If you need an example, think of the fraternity party in the movie "Animal House". Oh, you think I'm kidding. An example is clearly called for.

One party comes to mind. Philippe Kahn's (*Turbo Pascal*, *Sidekick*) toga party in San Francisco. It was held in an atrium area inside a hotel. A friend and I walked in to check the party out. There was a band setting up, an awesome bar, and plenty of togas. In the men's room of the third floor, we found people busily filling condoms with shaving cream to drop on the crowd below "when things really get going".

Well, I was a coward and left, but Jerry didn't, and won some fame by actually making it to his headliner speech the next day, hung over and all, to a standing room only crowd of about 3,000 people. He gave the speech while working on a "hair of the dog" beer. (His is the one talk at West Coast Computer Faires that is always SRO, by the way; catch it if you can next spring).

Ninth, and finally, Jerry's house is pretty wild. I said he was into the tactical and strategic side of war gaming; it hardly prepares you for a house filled with genuine middle-Ages weaponry. (I remember when he brought a double-edged steel battleaxe to the Hackercon 2.0 Halloween party, and someone promptly christened it "Double sided, double density"). But my favorite part was Jerry's workroom. He's equipped it with a target, backstop, and pellet gun; when some idiot sends him a press kit on a product he doesn't like, he feels free to shoot pellets at it... while he's talking to them on the phone.

I stole this idea for the Data Pacific office, where it has become a popular way indeed to let off tension after a particularly bad phone call. 3 1/2" inch disks in particular make excellent targets for a pellet gun. ("Recommended").

Well, there you have a quick tour of what I see in Jerry Pournelle. If you start a conversation about him among Computerfolk, you'll likely hear a few people condemn him; it's likely he's stepped on one of their sacred cows in a column. (Don't try this at a Mac user group meeting/revival lest you be lynched). But I think you'll also find that most of the people who condemn him so quickly are pretty shallow, the sort of people who condemn anyone who doesn't totally agree with them.

He's a complex guy. He's done many things I have no room to list here. But the public image is pretty different than the reality. The reality is he's a person who's loyal to his friends, knows how to enjoy a party, and who could care less about what's fashionable today in the industry. Under all the necessary gruffness he keeps against PR types and True Believers, he's a pretty good person, and as any bookstore owner will tell you, he's a writer that *sells*. I am inclined to judge him a lot more by what I've seen him do, and I've seen him do some pretty kind things, stuff you wouldn't expect from someone in a camo jacket and an SOF tote bag.

About the time this column comes out, I'll be turning 30, which is a traditional time to stop and think about how your life is going and maybe redirect it some. One way to do this examination is to look at others and profit from their example.

So I will say that I could do a lot worse than to end up being much like him.

See you next month.

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THE DESKTOP PUBLISHING MARKET

What Are Your Choices?

by Wm. Price

DTP Takes Off

Desktop publishing continues to be the hottest ticket in the PC market place. In 1986, some 4000 software packages were sold. Sales in 1987 will reach 53,000 and more than 300,000 are forecast for 1990. From a $3 million base today, dollar sales are expected to almost triple by 1990. Associated computers, image scanners, and laser printers will follow the same trends.

For years, office computing -- namely IBM -- has driven the home computer market. But there is now an emerging trend -- experience in a richer and wider variety of home computing products is beginning to influence the selection of office systems. A theme that can now be heard more frequently is, "I have more computing and communications capabilities at home than are available in the office." This is demonstrated by the new breed of powerful and versatile desktop publishing systems that are being delivered at incredibly low prices. The original STAR hardware and software system developed by Xerox was high priced and aimed at the office market. As a consequence, it has been slow in sales compared to other desktop publishing hardware and software. The genius of Apple, teamed with Aldus and Adobe, introduced greater capabilities at lower cost and targeted retail outlets for sales. Desktop publishing moved into the home and office environment to spawn a new industry and revolutionize the way small printing and graphics companies do business. And it accomplished this with general rather than special purpose hardware.

Corporations that produce large quantities of documentation by contract typesetting have now established in-house desktop publishing capabilities. In government agencies with central publishing organizations, reasonably priced desktop publishing facilities are beginning to spread to the far corners of the agency to establish decentralized operations. The central facilities of the U.S. Government Printing Office, the largest publisher in the world, are being eroded. Roles and responsibilities are changing as they did when word processing moved out of the central typing pool to the desk of almost every secretary in an agency or corporation. The issues are control and economy. Users simply want control over their work and over their presentations. With desktop publishing, they now have this control over results as well as schedules and costs.

Atari and DTP

There is an adage, "While the apple pie is hot, put the cheese on it so it will melt". That is precisely what Soft Logik has done with *Publishing Partner* which still holds the lead for ST-based desktop publishing systems. *Fleet Street Publisher* has not been able to bring all the pieces together, and the time lag in doing this is widening the distance between these two systems. In fact, a new "Professional" version of *Publishing Partner* may be on the streets by the time you read this.

Atari, unfortunately, doesn't appear to understand this principle. The Mega is not much more than a repackaged 520 or 1040. Even though there is a new operating system, the blitter, and additional RAM, this is not an astounding advancement like that offered by the Mac II over the SE and earlier Macs. The Atari PC IBM clone had the kind of features that would clearly make it stand out in the market place. The mouse support alone would make it a singular choice among the compatibles and clones. Atari waited too long, however, and the Blue Chip and Commodore PC have now nibbled away a good part of the market. The apple pie (not Apple's) is getting smaller. And for all practical purposes, the Atari PC, in its present incarnation, can be relegated to the Sunnyvale museum of good ideas that never made it.

The Atari Laser

The Atari laser printer is yet another example of what may be too little, too late. It ignores the success from wider market applicability that could have been offered by adopting Postscript. With the wide-spread adoption of Postscript by over 20 of the laser printer manufacturers and big systems producers like IBM, DEC, and Wang, Atari simply did not pay attention to the handwriting on the wall. Why should one buy the stripped down Atari printer rather than the Hewlett-Packard which is lower in price? Why buy a printer that is dependent on the unique GDOS which has problems and is not fully accepted by Atari software developers? Why buy a laser printer that is dependent on a unique desktop publishing system, a unique set of fonts, and one that is not compatible with other printers and drivers in the marketplace? Remember the grief suffered with non-Epson compatible printers? And why buy a laser printer (an electro-mechanical device) from a manufacturer that has made a virtue of its disdain for

users and has a solid track record of non-support for its products? Atari has not been as successful with mechanical products (Chinon floppy drives, hard disks, and dot matrix printers) as they have been with electronics where they excel.

In considering the new Atari laser printer, be sure to take a close look at current trends in desktop publishing software. Any software of importance is built around fonts and drivers compatible with Postscript. And for good reason! These systems give flexibility to use a wide range of laser printers available in an equally wide range of features and prices. Postscript also provides the user with a vast selection of fonts and the additional capability of using a higher quality (resolution) phototypesetting device. Can you envision the developers of *ReadySetGo ST!* or the Linotronic phototypesetter making an investment to support a narrow GDOS or *DeskSet* market? The extensive range of type fonts that are available from Postscript compatibility are significant. The variety and quality of these fonts are superb, and almost any need can be met from a catalog of well over 500 Postscript fonts from a growing number of producers.

Another reason for choosing Postscript is the way it produces different point sizes. From a single font, Postscript beam strokes the outline of a character and fills it in. An algorithm scales the size to produce fonts ranging from 6 points to as large as a page or over 700 points. These multiple sizes are generated from a single set of data for each font.

For most non-PostScript printers, such as the Atari Laser and the Hewlett-Packard, separate character sets are required for each point size. A single set for one point size contains pixel images for each of the characters in that size. With a variety of sizes, this extracts a toll on RAM as well as on printing speed. An example of this is well illustrated by Mac fonts used to drive the Image Writer. A separate set of characters must be installed in the system font library for each point size. At 6 points, the character set requires around 1,000 bytes. But for sizes up to 72 points, 30,000 bytes may be required. This cost in storage and printing speed is not demanded by Postscript.

If all you want is daisy wheel output at higher speeds, by all means, buy a low cost laser printer like the Hewlett-Packard Laser Jet. But first, make sure that your software will support it! Or, if you are satisfied with a smaller selection of fonts and with being tied to a single desktop publishing system and printer, examine Atari's new offering in *Deskset*. However, if you want to go beyond this with flexibility, variety, and market support, Postscript is the clear answer. Don't be deluded by arguments that Postscript is slow and that better drivers are being developed. You'll be waiting for the next DeLorean or Bricklin automobile, and your search for fonts will be similar to finding spare parts for these cars. Also think of how you will unload one of these unique creatures and recoup a reasonable part of your investment. Atari could still carve out a niche if its laser printer were made Postscript compatible and if it, or its third party developers, made a range of Postscript fonts available for the ST.

For those who cannot resist a laser printer for the home or are actively searching for one to use in the office, note that prices have declined and will continue to drop. The Apple Laserwriter no longer holds the lead in Postscript printers. In fact, the more powerful printers now entering the market are turning the Laserwriter into a relic. Accelerating this relegation is the fact that the Laserwriter, until last September, still has one of the earliest ROM versions of Postscript. New printers like the Qume ScriptTen come with Postscript Version 47 ROMs. Most of the newer printers are delivered with 2 megabytes of RAM and have an option for 3. Apple's LaserWriter Plus is limited to 1.5 megabytes. With additional RAM, printers can handle full page graphics, produce these graphics faster, and provide storage for additional downloaded fonts. The majority of new Postscript printers come with a ROM library of 35 fonts. Both serial and parallel printer ports are available. And many offer Qume, Epson, and Hewlett-Packard emulation in addition to Postscript compatibility. Fully configured, expect to pay in the neighborhood of $4,000 for one of these Postscript compatible printers.

Laser Engines - White vs Black

There are basic differences in laser engines that are characterized as "write black" and "write white". The original and father of desktop laser printing -- Cannon -- produces a write black engine. The black, image portion of the page is beam stroked and charged by the laser. Toner is attracted and fused to these stroked areas. However, between the beam strokes there are fine hair lines that are not charged and remain white. As a consequence of these fine white lines, the image is not rich black. This is most apparent in large areas where the blacks appear grey and mottled. With a magnifying glass, the stroked lines forming a character and the white hair lines between these strokes can be seen.

When Ricoh introduced its engine, a technique the reverse of that used by Cannon was

adopted -- write white. Instead of beams electrostatically charging the black image area, the white background around the image is stroked or painted. The toner is attracted to the unstroked or image part of the page. The result is a richer, more dense black. This difference can be seen in samples of Helvetica type produced on both engines. Helvetica is a thin font, and on a write black engine it looks grey and anemic -- much thinner than it should be. The write white version has fuller body. But the newest Cannon engine, the LBP-8II, corrects this problem and now produces a dense write black image.

Beyond this recognizable difference, there are claims that write white characters have ragged edges. If this is true, try to rationalize why write black characters don't also have ragged edges. Additionally, some of the earlier write white engines showed traces of feathering or an ever so slight random dusting of toner. This evidently was caused by problems where small portions (pixels) in the white background were not charged. Reportedly this has been cured in recent production models.

NEC has made yet another departure in technique. Instead of using a laser beam, its new SilentWriter LC-890 uses LED (Light Emitting Diode) shutters. Like the laser engines, it also produces 300 lines per inch resolution. An attractive device with two paper tray feeds, serial and parallel ports, a write white engine, and three megabytes of RAM, the NEC is delivered with Postscript Version 47.

When selecting a laser printer, examine samples of small 6 point type size and observe how cleanly characters are defined and how sharp they appear. Most large size fonts produced by different printers will look the same except possibly for richness of the blacks. Examine large areas of black for denseness and even distribution. Another test is how well the printer produces a standard grey scale. On many printers, the blacks and dark greys aren't well distinguished. Neither are the whites or very light greys. The scale may appear to jump from black to medium grey and then white in three steps. The printer should display the seven steps of a grey scale. If you have an 8X or 10X magnifier (available from a photographic or lapidary store), examine the pixel pattern for evenness and sharpness.

Finally, be aware that buying a laser is similar to investing in a stereo. The amplifier, tuner, turntable, and speakers are just the down payment. The endless purchase of record albums are the hidden cost. With laser printers, toner and belts must be changed every 3,000 or 5,000 pages. Check the duty cycle in pages per month and this will tell you how often the laser printer must be maintained.

After all costs have been examined, the print service offered by various vendors such as CACI may be even more attractive. CACI supports Postscript on a 300 line per inch laser printer as well as 1200 or 2500 lines per inch on a high quality phototypesetter. Use your ST and *Publishing Partner* to develop your copy. Then just take or send a floppy disk in to have your file printed on a high resolution laser printer. At roughly a $1 a page, you would have to print quite a few pages before you even came close to the cost of buying your own laser printer.

The Software Scene

If it does come about, *ReadySetGo* may be the next major contribution to ST desktop publishing capabilities with Postscript compatibility. However, Manhattan Graphics and Letraset may have second thoughts about the ST market potential after looking at Atari's laser printer in its present incarnation. Those who have used *ReadySetGo* with the Magic Sac can already appreciate its capabilities. It is quick and easy to use. Although there are feature trade-offs, it is a strong competitor to *Publishing Partner*. Among *ReadySetGo*'s nice features is the the use of style sheets like those in *Ventura Publisher*. Another strong feature is the smart separation of specifications for fonts, type styles, and sizes. Because of this separation, pages can rapidly be changed from one font to another, e.g. Helvetica to Times, while preserving the variety of type sizes and faces or styles in the original. With *Publishing Partner*, the font and size are linked on a single menu selection. If the font is changed, all the point sizes in the original will also be changed. And the different sizes will be changed to the single size identified in the menu selector box. The same is true for *Pagemaker*.

ReadySetGo also has a nice automatic scrolling feature. When marking the layout of page columns, boxed areas, or when highlighting text for change, as you drag the mouse toward the right side or bottom of the page, the window automatically scrolls to display the off screen image area. Although *Publishing Partner* is cumbersome in this respect, it is comparable in its method of designing a page layout. The columns, gutter, and four margin dimensions are displayed in a menu. The values can be entered in inches, picas, or centimeters, and the page layout will be automatically drawn to these dimensions by the system. This is more accurate and less time consuming. But, *ReadySetGo* refreshes the screen much faster than *Publishing Partner*, and gives the feel that you are doing

the job more quickly. *Publishing Partner* falls short with the lack of a hyphenation dictionary, but this will change.

Automatic kerning is another shortcoming in several packages. However, this is a function of both the software and the Postscript font library. Data for appropriate letter pairs and their kerning space is carried in the Postscript font library -- not in the desktop publishing software. Lacking a font library with this data, the software cannot automatically perform kerning. Kerning data and sometimes the applicable letter pairs are different for each font. Look at Helvetica, Times, and Palatino to examine these differences. This underscores the reason for staying with software and printers that are Postscript compatible.

What About PageMaker?

And what about the highly touted *Pagemaker* from Aldus -- the system which all others are compared to. *Pagemaker* is singular. It stands out as the one package with the widest number of skillfully wordcrafted and obliquely polite reviews. An example:

> *Pagemaker* provides all the tools that a graphic organization uses in the design and layout of publications. Its implementation of these tools follows the same manner that designers are familiar with in developing their page layouts. However, if you are producing large, multi-page documents with a variety of styles, other desktop publishing systems may be more appropriate.

What this says is that *Pagemaker* isn't easy to use. It's a labor of love. *Pagemaker* is proof again of the simple principle that feature-rich, by definition, means complex.

But, *Pagemaker* does bring with it most all the capabilities that will be needed for publishing -- and more. It is not easy to use, but it is powerful. For those that have used *Pagemaker* with the Magic Sac, the amount of effort that goes into producing a publication is readily apparent. A feature by feature comparison of desktop publishing software requires a separate article, if such a comparison would clearly identify a singular choice. More on this later. For the moment, *Publishing Partner*, *ReadySetGo*, and *Pagemaker* all address the basics required to design and produce typeset publications.

One simple capability that is lacking in *Publishing Partner* is the ability to change type face or other characteristics with the search and replace editing tools. This facility would allow you to replace the words "caveat emptor" throughout the text with the same words in italics. At the moment, type specifications cannot be included with a replacement word. The Xerox STAR, *ReadySetGo* and *Pagemaker* do have this very valuable feature.

What About Productivity?

Beyond this, a comparison of features would not address the fundamental shortcoming in these desktop publishing packages. That shortcoming is the lack of productivity. For those that have used any of the three desktop publishing systems previously discussed, even a five-page document with a small variety of bold and italics faces will give you a mouse elbow and wrist. To define point size and then type face for each paragraph or section header in a document requires two separate menu selections. You can be thankful that the designated text stays highlighted between the two selections. Although Function Key macros in *Publishing Partner* and a similar style menu in *ReadySetGo* reduce some of the work, the price paid for typeset quality from these systems is the lack of productivity.

CURRENT NOTES is an example of this productivity issue. A monthly publication averaging 76 pages, the final copy is organized and produced in camera-ready form by one person -- the managing editor -- in his "spare" time. If desktop publishing in its present form were used, it would probably quadruple time demands. From two to four people would have to be "hired" to work within a narrow time window to meet monthly schedules. An alternative would be to change from monthly to bi-monthly and buy breathing room. Until productivity is satisfactorily addressed by software developers, desktop publishing will continue to extract a price for its quality products.

Ventura Publisher

Productivity is where *Ventura Publisher* stands out. This system was developed by part of the old Palo Alto STAR team that had departed Xerox for better horizons. After *Ventura Publisher* was developed and its capabilities demonstrated, Xerox bought the team back.

Ventura Publisher offers the best of both worlds. It has the menu and icon features like the other desktop publishing packages (it runs under GEM on a PC), but it carries this a step further with full-fledged style menus or macros. Each element of text that has a different style or format can be assigned a unique tag of the user's choosing. The typographic specifications such as font, type face, point size, line leading, margins, and justified format are defined in menus for each tag. The tag symbols can be as simple as "PH" to represent a

paragraph header or "P" to represent paragraph text. The standard paragraph symbol used in some word processors can be defined as a tag.

Tags can be imbedded in text as it is being prepared with a word processing system. This text file is then imported by *Ventura Publisher*. And here is where another difference comes to play. The text file can be processed as a batch, rather than an interactive, job. (Shades of the older mainframes without terminals!) *Ventura Publisher* searches for the tags imbedded in text, executes the appropriate typographic specifications, and builds the document. In this document building process, columns are examined for widows and orphans (a single paragraph line remaining at the very end or beginning of a page) and lines are automatically adjusted between columns and pages. In addition to horizontal line justification, vertical page justification is also performed.

Another bonus with this approach is the ease with which styles and formats of an entire document can be changed. Without revising the text, specifications in the style menus can be modified and the text file reprocessed to these new specifications. Importantly, Ventura's text is always neutral to style, page layout, and typography. Style menus give this definition. The tags in text only mark and identify segments that are to be given different emphasis, and the required emphasis is specified independent of the text. Despite the fact that some interactivists may wince at thoughts of batch processing, this approach not only works, it is more productive. Interestingly, this is the way computerized typesetting was done in the 1960's and early 70's. It demonstrates once again that there is a right time and place for everything. Ventura has delivered an old wine in a new bottle.

This system would really stand out on a 4 megabyte ST with multi processing. *Ventura Publisher* may run under GEM-PC with the new version of pcDITTO, but a hard disk is demanded. Like *Pagemaker* on the IBM PC, Ventura requires that you define the type of monitor, printer, and other variables of the system being used. This installation procedure generates an executable system of over 1.5 megabytes -- thus the necessity for a hard disk. As part of the IBM architectual legacy, you just can't boot and run a large system like this. The hard disk and configuration requirements also apply to the PC version of *Pagemaker*. And the PC version doesn't match up to *Pagemaker* on the Macintosh or on the ST with Magic Sac.

Interleaf

A powerful competitor, that has the same type of tags and style menu features as Ventura, is *Interleaf*. This system operates on a Sun micro or an IBM AT. It is not only powerful, it comes with an explosive price of over $20,000. And if there is any question where the desktop publishing action is, *Interleaf* is being ported from the AT environment to the Macintosh. Price for the Mac version of this software will be around $2,500. But don't let the price make you overlook the capabilities of this package. It goes far beyond desktop publishing to support the life cycle management of information. It addresses the tasks from creation through communication, information base management, retrieval, repackaging of information products, and finally the disposition as a permanent archive or trash canned file. It was also the first workstation system produced for the IBM PC. The new information management system from Kodak and another jukebox optical disk retrieval system are among emerging systems that are based on *Interleaf* software.

What about Big Blue?

The IBM PC or PS-2 series are not well adapted for desktop publishing with the possible exception of *Ventura Publisher*. *Pagemaker* on the PC doesn't compete with the same software on the Macintosh or even the ST. Wang has jumped into the desktop publishing market by building an IBM PC compatible and putting its money on *Pagemaker*. (This says something about Wang's own hardware and software offerings). A better choice on the Wang PC, if the option is available, will be *Ventura Publisher*. Unlike the Macintosh or even the ST, the IBM PC and its clones just don't have the right graphic-based architecture to effectively support desktop publishing. Prior to the PC, IBM's experience was with mainframes and operating systems that directly supported programmers rather than end-users. The PC architecture and DOS are true to this tradition. MS DOS based systems are not intuitively obvious. A person with Alzheimer's desease can easily use an ST or a Macintosh. But this is virtually impossible with MS DOS. One reviewer put it squarely, "Applause for the IBM is like that for the dancing dogs. People are applauding not for how well they dance, but for the fact that they can dance at all". Trying to fit end-user (people literate) and graphic desktop publishing functions into the PC and its DOS environment is like trying to use a toothbrush for a drafting pen.

Future Trends

Desktop publishing is running counter to the trends of the paperless office predicted a half decade ago. Indeed, paper is not needed to communicate, to transfer or to file and maintain information. These functions can be best performed with information in electronic form. However, where information is presented to the

reader, the medium of exchange will continue to be paper. This information will be presented in typeset quality with the facilities of desktop publishing. And this quality, this lubricant to reading, will remove the friction encountered with mono-spaced, single size type. Printed and other graphic presentations will take on a new role and a new meaning. The message is in the medium. There could even be an interesting marriage with CD-ROM applications where data base information could be displayed on the monitor or printed in typeset quality. Desktop publishing will give new emphasis to how information is presented and that the visual quality of these presentations will improve. But will substantive quality and content also improve? There are equally abundant examples to support answers of "Yes" and "No".

Over the next year, *ReadySetGo*, *Pagemaker*, and probably *Publishing Partner* will be upgraded to include the full-featured style menu and batch processing options now available from *Ventura Publisher*and *Interleaf*. They will have to add these features to stay competitive. Aldus has already made the announcement for *Pagemaker* and version 3 should be on the street now.

At the moment, the Atari ST is the only computer that allows you to operate all of these packages. There is no other single computer that supports TOS/GEM, Mac's Finder, PC DOS, CP/M, and around the corner -- Unix! This gives you the opportunity to try a variety of software and make a decision for the home and the office before comitting to a more expensive hardware system.

Armed with your ST and its MagicSac and pc-ditto emulators, you are in an excellent position to master trends in desktop publishing. And, with such variety, you may become the most well-versed expert in the office -- at least the one with the most hands-on experience. *Publishing Partner* and pc-ditto can drive Postscript laser printers. Soon, Magic Sac will do the same if it can also emulate the AppleTalk network. In the interim, you can transfer your Magic files from *Pagemaker* or *ReadySetGo* to a Macintosh for production of laser copy. With this rich experience, substantial contributions can be made to the selection and use of appropriate systems for the office. And perhaps desktop publishing may become a sideline or even spawn a cottage industry operation after retirement. Ready? Set? Make your page!

Reference Sources

There are two monthly magazines devoted to desktop publishing, Publish! and Personal Publisher. I feel the latter is currently superior in content and coverage. Each issue has several articles focusing on specific topics such as fonts, laser printers, page layout styles, etc. There are also reviews of various publishing systems and updates examining features included in new releases of software. PC Magazine has had three cover feature articles on desktop publishing with sample output, as well as special features comparing laser printers.

Of all the articles comparing capabilities and identifying shortcomings of software, the original feature and follow-up issue of PC Magazine is a must to read (see Volume 6, Numbers 3 and 13). A two-page layout was submitted to a graphics company experienced in using systems such as *Pagemaker*, *ReadySetGo*, *Ventura Publisher*, *Harvard Professional Publisher*, and *Xpress*. The layout included masthead, logo, graphics, two-column text runaround, and a variety of formats and type styles. The company produced laser output from each system. The different products were annotated to describe what the systems could not do and how easy or difficult it was to meet the layout and typeset product specifications. This two-part series of articles is one of the best evaluations of desktop publishing systems available.

Mac User, Mac World, and Mac Week also provide good coverage of this topic. From Boston, there is a new quarterly journal from the National Association of Desktop Publishers. In the first issue, "Toner: The Black Gold of Electronic Publishing and Printing" gives tips on how to maintain laser printer quality.

Seminars and workshops on desktop publishing abound. Jonothan Seybold has now focused on this facet of computing and is issuing a series of reports on desktop publishing and industry trends and organizing conferences that attract industry leaders. Recently in Washington, the first International Desktop Publishing Conference, a three day affair sponsored by the Government Printing Office, was held.

Paperback publishers are also beating it to the street with specialized books on "How to Get the Most Out of..."! There are at least four books on *Pagemaker*, two on *Ventura Publisher*, and three devoted to the Postscript language. One is due out soon on *ReadySetGo*. Most were produced with the desktop publishing software that they describe. Additionally, there are excelent volumes on the general practice of publishing, type fonts, and page design. Locally, B. Dalton at Seven Corners, and Reiter's technical books in the District are among the best in stocking titles on this subject.

COMPUTE YOUR ROOTS

Genealogy Package for the ST

Review by Robert W. Ford

The handwritten reply to my critical letter about not receiving a timely response began, "But Mr. Ford, you do not understand. I am only a 17-year-old high school student. This is my first commercial software program. I have not sold enough to hire a secretary yet." At that point, my cold heart melted, and I sent him money for the next upgrade.

I purchased my ST to help manage a growing genealogy data base. I had never used a computer before, and got the ST because of the "Power for the Price." I did not know that genealogical software was unavailable. So, I learned to use VIP as a database management system while I waited for over a year for something to come on the market.

Another NOVATARI member with whom I work knew I was looking for such software. He had seen on GENIE a notice that *Generation Gap* had been developed by Flying Pigs Software of St. George, Utah. He then saw it at L & Y Electronics in Woodbridge, Virginia. I rushed to buy it. It is written in dBMAN.

I then found at L & Y *Compute Your Roots*. It cost $29.95 and was written by Jerry Halls, the young high-school student, using *Personal Pascal*.

Both programs have been improved. Neither can compete with *Roots II* for the IBM computer, but each costs only 15 percent of the $195.00 price of *Roots II*. *Roots II* will run on the ST with *pc-ditto*. After considering all three, I am using *Compute Your Roots*. It is designed for both small and extensive genealogy projects. It has good screen graphics, and presents you with a simple way to enter information with little pre-planning.

Compute Your Roots is not copy protected, so don't steal it. This young man deserves support. It will run on a color or monochrome monitor. You must, however, have a printer which will print in condensed mode and capable of underlining in order to print out a pedigree chart or family group sheet.

You can boot with the program disk. The control panel and install printer are desk accessories. The program screen is easy to use, indicating where to enter specifically defined data about each individual.

Along the left side is a seven button-type function pad on which you click the pointer to select what you want to do, i.e. create an individual record or family group data and see it in a pedigree chart. One of three screens will appear depending on your selection. You can print out a quick index and chose not to print the several Latter Day Saint (Mormon) fields. Along the bottom are ten function keys on which you can click the mouse or use the regular function keys. *Compute Your Roots* is capable of supporting multiple marriages when searching for spouses. It contains an extensive array of tools to help you in your genealogy work.

If you are interested in developing your family history, *Compute Your Roots* is a good tool for the ST. I use it. It has only one major disadvantage. It will print out only four generations at a time. That goes back only to your great grandparents.

If you are interested in learning how to research your roots, you could consider joining the National Genealogical Society (NGS), 4527 17th Street, North Arlington, VA 22207-2363. NGS offers a home study course, American Genealogy: A Basic Course.

You can also join the NGS/Computer Interest Group without joining the NGS. The dues are only $5.00. There are very few of us using the ST, and I could use some help with all those IBMers.

One final note on *Compute Your Roots*. Jerry Halls advises me that he plans to add a few new features and issue a final version with new documentation in the summer of 1988. He then will be going on a two year mission for his church before he goes to college and continue his computer work.

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dBASIC dBMAN

By Joe Waters

LET'S BUILD A MAILING LIST

One of the most crucial tools in my ST arsenal is Versasoft's *dBMAN*, "the intelligent database manager." This program stores the *CURRENT NOTES* subscriber list, prints out monthly mailing labels (over 2,000 strong!), stores and prints out the Current Notes Library labels, automatically prints out all my subscriber renewal notices and the invoices for CN store sales. This is a program that gives the user a LOT of flexibility.

However, power and flexibility usually come at a price. In this case, the price is complexity. Although dBMAN can do almost anything you want, to effectively tap this power, you must learn how to handle dBMAN command files. And that, in turn, requires learning a programming language. If you've ever programmed anything at all, the job is not as difficult as you might think. Unfortunately, however, many who have relied on the dBMAN manual for instructions have found the going tough indeed! So, with this column, I'll try to lend a hand. Note that, although I use dBMAN for my examples, much of what is discussed will also apply to a wide variety of database programs.

[If you don't have dBMAN and are not sure whether you really want it or not, Versasoft has released a demo program of the latest version (4.0) of dBMAN. The demo stores a maximum of only 20 records but can be used to give the program a try. It is available this month, along with the programs and code in this column, in the CN Library as disk #219. More about the latest release of dBMAN below.]

Let's start with something simple yet universally useful, a mailing list. We need a structure (a database) that holds name and address information and a phone number. We want to add information to the database and make corrections or updates as needed. And finally, the most important requirement, we want to get the information back out in a variety of different formats (list of names and addresses, list of names and phone numbers, mailing labels, etc). Let's see how we would accomplish this with dBMAN.

Create Your Database

A database consists of a number of records. Picture a 3x5 card file as a database with each card representing a separate person (record). The information is laid out (structured) so that each card looks the same, for example, name on the first line, street address on the second line, city, state, and zip code on the third line, and phone on the fourth line. Every item of interest recorded on each card corresponds to the various "fields" found in individual records in a database. To create a database, then, we need to define the fields, or the kind of information, we want stored in each record. In dBMAN, to define a field, we give the field a name, indicate what kind of data we want stored and how much space we want to reserve for the information.

dBMAN has four kinds of data fields: character, numeric, date, and logical. A character field can hold letters and numbers and, indeed, any character you see on your keyboard. For a mailing list this is the kind of information we need. We would reserve space for a name (with first name and last name stored in separate 18 character fields), a street address (30 characters), a city (18 characters), state abbreviation (2 characters), zip code (5 characters -- or 12 characters if you want the longer zip code format), and a phone number (12 characters). Even though the zip code contains only numbers, we still store it as a character field. A numeric field is for numbers that you would perform mathematical computations on such as prices, quantities, weights, etc. Although we may want to sort on zip codes, we would never add them up or multiply them!

With the above information in hand, you are ready to create your database structure. Enter dBMAN and use the CREATE command to create a database called MAIL1 (or whatever name you like). dBMAN automatically puts you in a form requesting that you supply a field name, type, and length. Enter LNAME (last name) for the field name, C for type of field, and 18 for length. Use the down arrow to enter a new field. For the second field enter FNAME (first name), C for type, and 18 for length. Using the information indicated above, fill in the rest of your fields. The completed structure is presented in Figure 1. When you have all the information as you want it, press CONTROL+S to save your database structure.

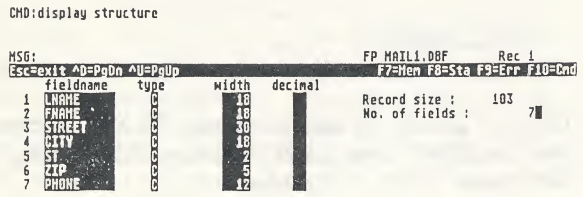

Figure 1: Structure of Your Database

Entering Data

Well, you have the form for a database, but you don't have any information in the database yet. To add information to a database, use the APPEND command. (You are already USING MAIL1, but if you were not, you would have to issue the USE command to indicate what database you wanted to work with before issuing the APPEND command.) You are presented with a blank form where each field is identified by name with an inverse video area indicating the space available for the information required by each field. When later you need to change or "edit" the information, the EDIT command presents you with the same format for changing data. Fill in the blanks (see Figure 2). To add a second record, press ^N for NEXT and a new blank form is shown. Fill in the second record and continue in this manner until you have a half dozen or so records. When you have your last record filled in, press ^S for SAVE. The append process ends and you are back at the dBMAN command level.

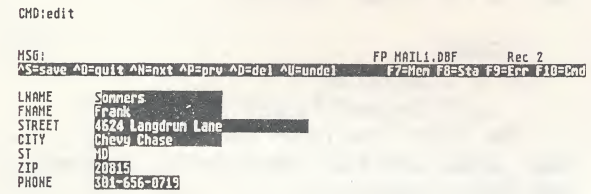

Figure 2: A Record Filled with Data

Now you have a database with data in it. This is your typical situation. From now on, you can add more information, edit the information already in the database, or list the information any particular way you want. To add more information, you would type APPEND once more and repeat the process as above. Let's not do that now. Let's try instead EDITing the information already in the database.

Enter the EDIT command. You are immediately shown information in the current record. Look at line 4 toward the top of the screen (the one that starts with MSG:). On the right side of that line, it tells you what database you are using and what record you are looking at. To move back toward the beginning of the database, enter ^P (for Previous record). To move forward, enter ^N (for Next record). You can use this method to look at all the information in your database. As you view each record you could change any information you wanted by just moving the cursor down to the appropriate field and replacing the data already there. If you make an unwanted change, you can always exit by hitting ^Q (for Quit); no permanent changes are recorded. If you make changes you want to keep, enter ^S (for SAVE) to exit. If you make any changes in a record and then use ^N or ^P to move to a new record, the changes ARE saved as you move on to another record.

Displaying Your Data

Although you can use EDIT to browse through your records, more often than not, you would prefer a simple LIST of the information in your database. To list all the information in your database to the screen, enter LIST ALL and watch everything scroll up the screen before your very eyes. In our example database, a record's information does not fit on an 80-character line so the info is wrapped around to a second line. Your printer can handle more than 80 columns if you move it to a condensed mode. Sending commands to the printer, however, will be the subject of a future column.

You can also use the DISPLAY command to look at your data. Enter DISPLAY ALL. Note the difference on the screen. Using DISPLAY, the data does NOT wrap around to a second line. Everything is on one line. Of course you can only see part of the line on the screen. To see the rest of the line, use the CONTROL plus left and right arrow keys to move the display to the left or right as needed. The DISPLAY command will only show you one screenful of data at a time and wait for your prompt before it shows the next screen. The LIST command will list the entire database without stopping.

Let's just look at SOME of the information by producing a list of last name, first name, and phone number. Use the list command:

```
LIST ALL LNAME,FNAME,PHONE
```

There's your list on the screen. Want that list printed? Simple again. Make sure your printer is on, then issue the following command:

```
LIST ALL LNAME,FNAME,PHONE TO PRINT
```

As you can see, you can list (or display) only those fields you are interested in. Experiment using the list (or display) command to show other fields in your database.

Sorting Your Data

If you entered your data randomly, the list printed above is in the order you entered your data. Suppose, however, that you want this list printed in alphabetical order by last name. You want to sort, or INDEX, the database on the LNAME field. Use the INDEX command. (The INDEX and SORT commands, however, are different. I will talk about the SORT command some other time.) It creates a new file, called an index file, needed to produce the listing order you want. Each index file needs a name -- it can be whatever you want. For simplicity, let's use the field name we are indexing on to be the name of the index file:

```
INDEX ON LNAME TO LNAME
```

With the above command, you have created a new file (called lname.ndx). (To see all the files in your A: directory, enter LIST FILES A:*.*). Try listing your data to the printer again as you did earlier. You will see that all the names are now listed in alphabetical order.

To keep your index up to date, always specify the index file when you use the database, i.e. say USE MAIL1 INDEX LNAME. With the index in force, when you edit or list, the records are presented in alphabetical order by last name. If you add data to the database, dBMAN automatically updates the index. If you use the database without indicating the index, adding data to the database will not update the index at the same time since you didn't specify an index. You can always update your index with the following set of commands:

```
USE MAIL1
SET INDEX TO LNAME
REINDEX
```

Mailing Labels

The explanations given above may go a long way toward satisfying the needs of many users. However, it won't produce mailing labels. The DISPLAY and LIST commands produce printed output where all (or part) of the info from each record appears on one line. For a mailing label, we need to split that information onto three lines. In addition, we are not going to want all those gaps between different fields that appeared when we listed the data in columns. How are we going to do it?

Go to the top of your file (type GO TOP) and issue the command (dBMAN output is shown in lowercase below for a sample record with my name):

```
? FNAME,LNAME
Joe                 Waters
```

(The "?", like in BASIC, means "PRINT".) You see the first name field printed followed by the last name field. Try this:

```
? FNAME+LNAME
Joe                 Waters
```

Output looks the same although in this case we are printing one big field consisting of the combination of the FNAME (18 characters) and LNAME (18 characters) fields for a total of 36 characters. Now, we get to use one of many, many dBMAN functions, the TRIM function. Try this:

```
? TRIM(FNAME)+' '+TRIM(LNAME)
Joe Waters
```

What happened? You printed the first name and last name but this time there was only a single space separating the two names which, of course, is what you would like on your mailing label. The TRIM function lops off trailing blanks from a field. Since all the blanks were deleted, we had to add a blank (the expression +' ' above) before printing the last name. This certainly could be the first line of our mailing label.

The second line is easy since all it would have is the street address:

```
? STREET
122 N. Johnson Rd
```

The third line holds the city, state, and zip. This line will, once again, require using the TRIM function:

```
? TRIM(CITY)+', '+ST+' '+ZIP
Sterling, VA 22170
```

There you have the third line of your label. Now, all you have to do is write a program that prints these three lines, and then prints three blank lines to skip to the top of the next label, for every record in the database. (If your mailing labels are one inch from the top of one to the top of the next, and if your printer is set at six lines per inch, you need to print six lines per label.) Write your program by constructing a dBMAN COMMAND file.

A command file is a simple text file. With version 3 or 4 of dBMAN, you create a command file, we'll call this one LABEL, by using the MODIFY COMMAND:

```
MODIFY COMMAND LABEL
```

Version 2 of dBMAN does not support MODIFY COMMAND. You have to exit dBMAN and use an editor to create your command file. This is terribly inconvenient. Having a simple text editor built into dBMAN is one of the most important features of Version 3. (More on different versions below.)

Create the command file you see reproduced in Figure 3 below. The first line indicates the database to use (including the appropriate index if any). Then, you go to the top of the file. andstart a simple loop through each record (DO WHILE .NOT. EOF) until you reach the end of the file. For each record, print the three mailing label lines and then three blank lines. The DO WHILE loop is not going to move the record pointer to another record. You must do that. You do it with the SKIP command which moves the record pointer to the next record in your database. The ENDDO command marks the end of your DO loop and sends up back to the top where we, once more, print out a mailing label. This continues until the SKIP commands moves you past the last record to the End Of File at which point the DO LOOP is done and your command procedure ends.

```
^Q=Quit ^S=Save ^E=EraLine ^U=PgUp ^D=PgDn ^->=EndLine ^<=BegLine
File=LABEL.CMD                                          BfSz=65000
use mail1 index lname
go top
do while .not. eof
? trim(fname)+' '+trim(lname)
? street
? trim(city)+', '+st+' '+zip
?
?
?
skip
enddo
return
```

Figure 3. A "Label" Command File.

Once all your statements are entered, use CONTROL+S to Save the command file. To execute it, type DO LABEL. That's it. Mailing labels will now start rolling off your screen. If things don't look just right, enter MODIFY COMMAND LABEL to check your command file and make any needed changes. When things look right on the screeen, you can try the printer. Enter SET PRINT ON and then type DO LABEL. Now, your output will be directed to the printer as well as to the screen. When everything is working fine, you might want to put the SET PRINT ON command right in the beginning of your LABEL command file with a SET PRINT OFF line added at the bottom. Now, that isn't so hard after all, is it?

If you put an asterisk (* - which indicates comment) before the SET PRINT ON command line in a command file, the system ignores that line. You can then experiment with printing results only on the screen and not using up reams of paper. Try modifying this command file to print out information in different formats on different lines. Check out the SPACE() function and the ?? command in your manual and see if you can figure out how to use them. Have some fun experimenting with your new found "programming" language. Can you figure out how to print out labels two across? Next month, we'll give you the answer to that one.

dBMAN Version 4.0

Versasoft is the publisher of *dBMAN*. However, Atari set up an agreement with Versasoft to market dBMAN. The product was at Version 2.0 when Atari started marketing it. Atari could sell Version 2.0, while Versasoft retained rights to product upgrades. When version 3.0 became available, owners of version 2.0 were notified by Versasoft and could upgrade (I believe the upgrade cost me $45 at that time). All of this is kind of industry standard. The odd thing here, however, was that Atari continued to sell Version 2.0. Long after Version 3.0 was available, Atari was selling Version 2.0. Version 3.0 was significantly better than Version 2.0 and many buyers were rightfully dismayed when they purchased a "new" dBMAN from their local Atari store only to find that it was Version 2.0.

Whatever the wisdom of such an arrangement may have been, it is over now. Versasoft once more controls the marketing of dBMAN. They now have released Version 4.0. When you buy a Versasoft version of dBMAN, it will have Version 4.0 in the box. The retail price of Version 4.00 is $249.95 for the interpreter and $249.95 for the Run time version.

To upgrade your copy of dBMAN, send your original diskettes, and a check, money order, or a Visa/Master Charge number and expiration date to VersaSoft - Update, 4340 Almaden Expy, Suite 250, San Jose, CA 95118. Update Prices: Version 2.x to 4.0 Interpreter: $80; Run time: $70. Version 3.x to 4.0 Interpreter: $45; Run time: $40. If you updated to version 3.0 on or after September 1, 1987, simply include a copy of your VersaSoft invoice and pay only the difference in price. For example: If you upgraded your interpreter to version 3.00 and paid $50, you can upgrade to ver 4.00 for only $30 ($80 - $50). Offer expires April 1, 1988.

I have only recently received version 4.0 so I can not give you a complete report. I can tell you that Version 4.00H has some bugs. Yesterday I obtained Version 4.00K so the version you get should be at least up to "K". If not, contact Versasoft. Version 4.0 database files are not directly compatible to Version 3.0

and must be converted. The original conversion program I received had some bugs and caused me some difficulty. However, when I contacted Versasoft, I discovered that a new conversion utility was available from their BBS free for the downloading.

It's is too early to give you a full review of the latest version, but, just to whet your appetite, let me list some highlights available in version 4.0. dBMAN now reads and writes dBASE III+ data files. A new BROWSE command allows full screen - multiple record editing. MEMO fields are now available for a free form variable length text field. Commands can now be appreviated using four-letter short-cuts. Custom data entry screens can now easily be created with the SET FORMAT TO command. Many new dBASE commands and functions (PUBLIC, PRIVATE, PARAMETERS, ALIAS, RANGE, CDOW(), CMONTH(), STUFF(), FOUND()...) have been added. Over 60 new commands and syntax enhancements including time arithmetic, LIKE (wild card pattern matching operator), and the ability to save and restore screen images. Version 4.0 is FASTER with a user definable cache buffering for programs and data. And, finally, a new 400+ page manual is included with each interpreter update.

CD REPORT (Continued from Page 11)

An annual subscription to the *Monthly Catalog* on SilverPlatter including bi-monthly updates is $950. A special pre-publication price of $750 is available until May 31st.

FROM SILVERPLATTER U.K., Bela Hatvany, managing director, reports that PAF-ROM-II, the *Post Office Address File* version two, includes geographic coordinates for each of the 1.3 million post-code areas and 23.5 million addresses within the U.K. Also, the CPC-ROM or the *Canadian Postal Code Disc* is updately every two months, and contains ten million addresses in Canada. These discs are installed presently in 80 dial-in inquiry centers across Canada, which retrieve a postcode for any address within an average of 0.7 seconds. The CPC-ROM has an operator-selected French or English interface and makes use of a thesaurus/dictionary to handle items like rue/rd/road, etc.

SilverPlatter Information Services Limited also reports having a contract with Teledirect, a subsidiary of Bell Canada, to build a prototype disc for a trans-canadian telephone directory. SilverPlatter U.K. also has a contract with a large European telecom organization for a directory which will be approximately one gigabyte in size.

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SUPER HUEY

An Uplifting Experience?

Review by Roger Abram

I never met a computer flight simulation program I didn't like. Until now. It's not that *Super Huey* by Cosmi is downright bad (at its best you'll learn the dynamics of helicopter flight), it's just that the program is agonizingly frustrating to play, let alone master.

For starters, between clicking on the program icon for *Super Huey* and actually getting the chopper off the ground, five minutes will slowly pass before your eyes. Five minutes! No matter how well-intentioned the programmers were in forcing you to wait while the helicopter's engine warms up, no game should take that long to get underway. As I start this review, I shudder at the thought of having to boot the program to recheck facts.

To complicate matters further, where the joystick would have been the optimum method for controlling the flight of the Super Huey, all controls are mouse based. To bank the helicopter left (controlling the main rotor), you need to hold the left mouse button down and push the mouse to the left (or West). However, to yaw left (controlling the tail rotor), you must push and hold the left mouse button down and move the mouse in either a Northwest or Southwest direction. Finding these locations with the mouse is an inexact science and results are never certain. Options to use either a joystick or keyboard would have been welcomed additions.

Apart from the highly detailed cockpit and its 33 indicators, graphics are nondescript. In each of the simulation's four scenarios, the ground is one color and is sparsely littered with objects which are supposed to resemble forests, towns, lakes, etc. Their only saving grace is that they provide a way to judge whether or not the craft is turning.

But enough griping about what *Super Huey* isn't. Peel off the program's shortcomings and what you'll find is a fairly decent, albeit cumbersome, simulator of helicopter flight. Even under ideal conditions, the rudiments of this type of simulation would require time and finesse to master.

Four flight scenarios are available to pick from in *Super Huey*:

Flight School -- the onboard computer guides you through maneuvers including takeoff and landing. A good place to start.

Exploration -- consists of flying around the vicinity of your base and mapping the terrain, major geological features, timberland, and any signs of life.

Rescue Mission -- the mission is to locate lost or incapacitated fellow military personnel. Once found, you are to land and pick up the party, if possible. If not, transmit the heading and distance where the group was finally spotted. The ground party has a homing device which your helicopter will detect when you fly into range.

Air Battle -- at a random location, you'll encounter an unidentified enemy helicopter force comprised of 32 choppers which you must destroy. At your disposal are 20 rockets and 2,000 machine gun rounds.

The scenario I find the most challenging is Rescue Mission. Not only must you scour the area searching for your lost comrades, but you must also bring the craft to a safe landing once they are found. Although you do pick up a heading direction from their homing transmitter when you are within range, using the heading as a guide is precarious because it hardly changes even after you have made drastic variations in your flight path. The manual doesn't adequately describe whether or not the heading from the homing transmitter is one you should immediately turn onto, or whether or not it's the heading you can take directly if you return to your base and start over. In any event, keep your eyes posted for your buddies down below and watch for their flare. Depending on your flying skills, some of them may wish you had never found them.

If you are interested in the program, I strongly recommend that you go to a local store and request to take it for a ride before deciding to purchase it. If all you're interested in is an overall helicopter simulator, you probably can't go wrong even with the awkwardness of the mouse as a controller. If, however, you'd like your simulation mixed with a touch of scenery and a bit more action, then this one's not for you.

Super Huey is available from Cosmi, 415 North Figueroa Street, Wilmington, CA 90744. (213) 835-9687.

DUNGEON MASTER

The Penultimate Fantasy Game

Review by Milt Creighton

The title itself gives you an idea of what I think of this game, but that in itself really doesn't tell you anything. Allow me to establish my qualifications. I was an early player of DUNGEONS and DRAGONS, and then ran two adult games that lasted for over a year. I have read quite a lot on the subject, played *Wizardry* (the first three scenarios), *Ultima*, *Phantasie I & II*, *Bard's Tale I*, and several others including a lot of the SSI offerings. Obviously, I like the genre and have overindulged in the escapism on enough occasions to become something of a local authority on the subject (at least in my own household). More to the point, I consider *Dungeon Master* to be the best of the lot and I plan to tell you why.

First, *Dungeon Master* is a step forward in the evolution of the genre. Most of the games quoted above are strategy games, though some have a real-time flavor. And both types have established certain conventions based on their designs that the programmers at FTL have taken great delight in ignoring.

In the strategy type, you make up a party of adventurers (possibly as many as six) of various character classes and mythical races and then take them down into underground labyrinths called dungeons. You actually see the corridors from eye-level and spend a good deal of your time mapping the dungeon - if you want to survive. There are traps and tricks galore, some of which you appreciate and some you don't. In the dungeons you encounter creatures which almost invariably attack you and, in the process of killing them, your characters gain strength and booty. The booty can be gold or silver or special weapons and magic items which increase the deadliness of your group. I have spent a significant part of my life playing this type.

On the other hand, the other type of game is more time-sensitive and most are map-oriented. By that I mean, your party of adventurers is represented by a symbol on a map. You move the symbol over the map and have encounters. Sometimes there are dungeons, but they generally are more in the arcade-fashion and you have to think fast to keep your party alive. I have played games of this type and enjoyed them, but I generally prefer the strategy-type games since they have more the feel of Dungeons and Dragons.

I think the strategy-oriented games are more fun to play because they have more of a first-person feel to them. It's easier to project yourself into the game. The progression of games of the strategy type is fairly standard. Generally they are very hard going at first - which translates to you get killed a lot. In the midgame, you never have enough money and your magic users are still too weak to defend themselves. Finally, in the latter stages your interest begins to wane because the all-powerful magic users take over the game. This usually happens because they have learned how to throw fireballs the size of tactical nukes. It's a generic problem, none of them seem to have been able to lick - until *Dungeon Master*, that is.

Dungeon Master is a hybrid of the two forms, combining the first-person feel of being at personal risk in a dungeon, while at the same time preserving the time-sensitive qualities of games like ULTIMA. It has always bothered me that in strategy-oriented games, if you are suddenly confronted with a new and potentially deadly monster, the approved solution is to whip out your trusty rule book and casually leaf through the pages to decide what to do. In the meantime, the monster politely waits for you to devise your strategy and usually is decent enough to succumb to your superior wits. Try that in *Dungeon Master* and you'll end up a pile of bones before you've even opened your spell book.

Dungeon Master comes on one single-sided disk. BARD'S TALE and ULTIMA IV come on two. Doesn't sound like much does it? Proving that appearances can be deceiving, FTL has used data compression techniques developed building spelling checker dictionaries to build a complex game with digitized sound, a little animation, and the best graphics I have ever seen in a game of this type. The graphics alone consume more than a megabyte in uncompressed form! It is a truly incredible achievement.

Dungeon Master has been a long time in coming. In fact, it has been something of a joke in the industry - Atari's prime example of vaporware, meaning a product that was announced so far in advance of its release many people were certain it was an unfounded rumor. Folks, I am here to tell you the wait was worth it.

Booting *Dungeon Master* takes forever because the data has to be uncompressed, but once you begin play there are very few disk accesses so your game will not be interrupted at every command the way it is with other fantasy role-playing games. By the way, *Dungeon Master* is a color game and while you can play it on a TV using your RF-modulator, you will find yourself at a disadvantage because the clues in this game are subtle and often worked into the beautifully detailed artwork. Otherwise, the game can be played on an unmodified 520 ST in spite of its complexity and data compression techniques.

Dungeon Master's opening screen has been around in public domain for a long time and many of you will have seen it. It's even used as the opening screen for at least one BBS I have accessed. It is a large metal door with push buttons labeled "Enter" and "Resume". One begins a new game and the other allows you to load a saved game position (which requires a separate disk). The credits are in the form of rolled scrolls which you can pick up and unroll. It's a nice touch but it doesn't prepare you for what is to come.

The game comes with a 26-page rule book and an 18-page short story which gives the rationale for the game. I love the story rationales since I never read them, believing them to be an impediment to hacking the game on my own. Not this time. There are clues here that will save you time and effort - read it!

Entering the game, you make your way to the "Hall of Champions". In the hall are 24 champions imprisoned in mirrors. You select four of them to make up your party of adventurers. They can be resurrected as they were in life, or you can choose to reincarnate them, in which case they lose their past skills but gain increased physical attributes and you can rename them. What should you do? It's matter of personal taste, but there are implications you won't appreciate until later.

Each of the champions begin with certain skills (unless you choose to reincarnate them). They each also have certain attributes. The most important attributes include health (or hit points), stamina (or endurance), and mana (which establishes your character's potential to use magic). There are also lesser attributes such as strength, dexterity, wisdom, vitality, anti-magic, and anti-fire. Those of you with experience in fantasy games have an idea what these mean. They will change during the course of the game.

There are four character classes to which the champions may belong: fighter, wizard, ninja, or priest. What is interesting about *Dungeon Master* is that it is possible to cross-train each character in all four disciplines! In fact, you had better make certain you do, because you won't survive later unless each character can fight and use magic. How do you cross-train? By having the character actually try to do whatever skill he is practicing. Magic users gain fighting skills by swinging a sword in combat, increase their ninja skills by throwing things, and gain wizard levels by throwing wizard spells, for example.

Spell lists are common to most adventure games. Bard's Tale, for example, has a list of spells you are granted for each major level you earn. To throw the spell, just type in the appropriate name or click on the list. Don't expect anything so simple in *Dungeon Master*.

In the world created by Doug Bell, *Dungeon Master*'s designer, magic is made of a mixture of four influences: power (or strength), element (as in elemental), form, and alignment. All spells in the game are made up of a mixture of two or more of these influences as represented by its graphical symbol. There are no spell lists, per se. You design your own spells, modifying each to fit the situation. Not all combinations work and some do not have the effect you were trying to achieve. There are scrolls placed strategically in the dungeon which will tell you most of the more common spells if you need them. The concept is elegant, if a little terrifying.

The spells are tied to the caster's mana and experience level. You cannot cast the spell if you don't have the mana to do so and even if you do, it will fizzle unless you have enough experience. Be careful where and how you use magic because casting a fireball too close to a wall will get your entire party killed. Your mana level goes up as you gain experience and rest will allow you to recover mana you have expended.

The other thing you are going to find that you need in *Dungeon Master* is food and bringing a sandwich to the computer isn't going to help. It is normally the critical deficiency you are most worried about right after hit points and mana. If you don't feed your characters they die. How do you get food? At first you find it lying around everywhere, an apple here and a drumstick there. Later you find monsters who will serve themselves up as tidy little packages if you can kill them. The screamers are great for giving your fighters some early experience, but the purple worms later on will most likely make a meal of you if you stand and fight.

That is where the real-time character of *Dungeon Master* stands out - in the combat. You don't have the time to position your characters ever so intelligently or decide just what spell

and what strength to throw. The monsters are on you like ticks on a dog and you had better have anticipated what you should do or that session will be a short one. SAVE THE GAME OFTEN!!!

You can save a different save-game position on each separate save-game disk. Also, you have a choice with your fighters whether to have them armed with range or close-combat weapons and you can have your magic users all set with their spells ready to cast. Learn this trick early and it will save you later on.

The solutions to the puzzles range from obvious to sublime. Suffice it to say that there are hidden buttons, keys hidden in drain slots, door latches in retaining rings and sconces, and walls that are not really there. There are places that teleport you, spin you in the wrong direction, and traps that open under you. Some of the solutions are easy; a few make you want to curse. More than a few evoke admiration for the programmer's imagination.

The game can be operated either with the mouse alone or the mouse in cooperation with the keyboard. Either way, it takes a little getting used to but seems to work fine if you don't panic in the middle of a fight. There is one bug in version 1.0 of the program which may or may not show up depending on the decisions you make. If you send your disk to FTL along with a stamped self-addressed envelope, they will fix it but since *Dungeon Master* is copy-protected you'll have to give up playing the game while it's in the mail. I don't know about you, but I'm not willing to part with mine that long on the off-chance I may encounter the bug.

The Bottom Line: In my opinion, this is the finest role-playing fantasy adventure game for any computer on the market today. While each separate aspect of *Dungeon Master* appears evolutionary in nature, the total package is a revolutionary new game design. It's truly incredible detail, beautiful graphics, scrolling animation, and digitized sound make it a sure bet to be a break-through product. *Dungeon Master* is the first must-buy game for the Atari ST computers to date and the only reason I described it the penultimate fantasy game is because I hear FTL is working on another. I'm already saving my money.

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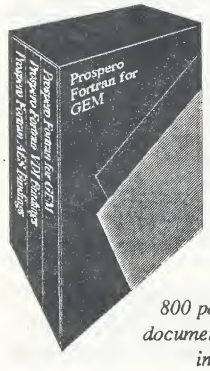

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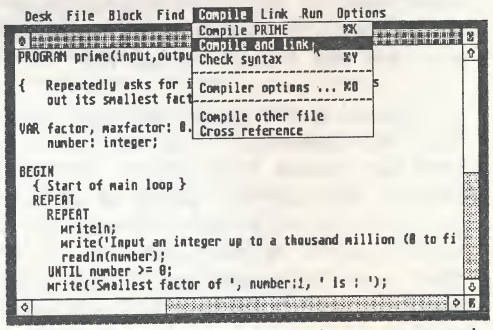

Windowing and graphics support is provided by GEM; the documentation gives all the explanation needed to use these powerful functions.

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INVASION

Practice in Typing, Spelling, Keypad, and Math Skills

Review by Bill Moes

The sky is falling ... the words are dropping. Then: laser shots from the lower corners as you key on the words themselves. The words are destroyed. Your city is saved! Do I hear the cheering?

Invasion, a learning program from MichTron, is designed to help with skills in math, typing, and spelling. A word, phrase, or math problem will descend and you'll have a few seconds to type it exactly, zapping each letter as you type. If you're not fast or accurate enough in this variation of an oft-used theme, buildings in your city are destroyed.

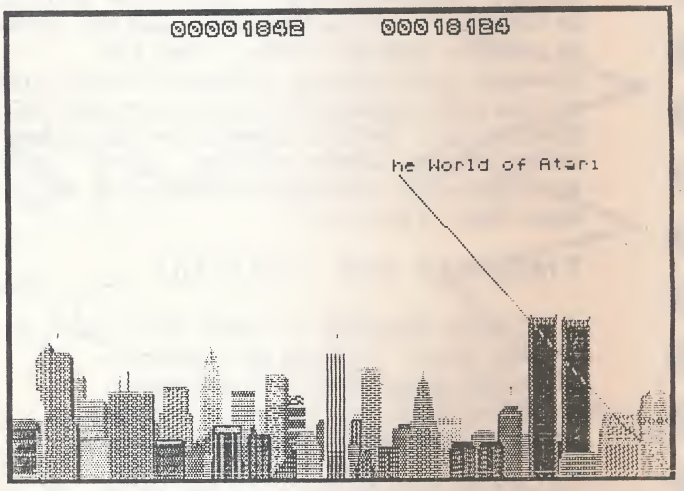
It all starts with your own list of words or problems. Using a separate program, create a list of words/phrases or math equations. You can have up to 20 in a list, each of up to 29 characters. Then to the game program, where you choose from three levels to determine how far down the screen the words are when they first appear. Another option allows you to set the order in which the words are shown, either randomly or in the listed order. You can also enable/disable the <SHIFT> key for capital letters.

The characters flash onto the screen and then begin to fall. Type exactly. But quickly. You're able to type far ahead, and then relax as the lasers nail each of those dropping demons.

There are three rounds, each showing a slightly different cityscape. Sirens will wail if you allow any portion of the city to be touched; a little music of appreciation plays if you're successful in your efforts. High scores, which can be reset, are saved to disk.

Math and vocabulary files are noted separately with a different suffix on the file name. When you first create a math file, you'll need to delete the default "*.VOC" in the menu selection box, and next type "*.MAT". The minimal documentation (a 12-page booklet) then directs you to click on the GEM "close box cross" to refresh the menu box. This didn't work. Pressing <RETURN> did. After the list is created and saved, you'll load the main program, make your option choices, and fire away.

For math, you'll need to use the keyboard's equal sign (=) as you create a math file. In the actual game, you can press the pad's <ENTER> instead. The math problems in the game are shown as either complete equations or equations with a question mark (?) replacing each numeral after the equal sign. You'll need to type the entire equation, not just the answer. This is definitely unusual, although I suppose there are some advantages.



The strength of this program lies in its do-it-yourself nature. There are only very short demo lists provided; anything of value will be your own creation.

I see one major problem in its design. When you're playing the game, you cannot stop using one list and switch to another without first quitting back to the desktop and then reloading the game. That's more than a little cumbersome. In other notes: the graphics are nothing special and the sound effects are standard. Invasion ($29.95), not copy protected, needs a color monitor for the game, although word lists can be created with either a color or monochrome monitor.

Invasion is not terribly sophisticated, but it could be an aid to schools and individual students. This program offers practice for some important learning areas.

[MichTron, 576 S. Telegraph, Pontiac, MI 48053 (313) 334-5700.]

RELAX AND ENJOY

By Joe Kuffner, (c) 1988

HYPOTHESIS: PATIENCE IS A VIRTUE

Every now and then, I consider myself VERY fortunate to be a columnist for *CURRENT NOTES*. One of the reasons that I feel this way is that I often have the opportunity to review software as soon as it is released from the publisher. In fact, on occasion, I have an opportunity to review software even before it hits the store shelves. The reason that I qualify my fortune is contained in my review of two new new pieces of software from Microvalue. They are *Liberator* and *Timeblast*, exclusively distributed by Star Soft Development Laboratories and TDC Distributors. My Public Domain selection is a modest program, simply entitled, *Darts*. I'm sure that after reading my reviews, you will agree with my hypothesis.

Timeblast and Liberator

I enjoy receiving software that I have yet to hear about. It gives me a chance to establish my own opinion of a program, objectively, without the bias of friends, advertising or other reviewer's comments. It also gives me a chance to "scoop" our competition by getting to market first. It is quite a challenge and responsibility. Usually.

Two new programs emerged from TDC Distributors that I have the opportunity to review. *Timeblast*, is an ST version of an 8-bit classic, in which you guide your helicopter through mountainous terrain, firing at enemy land installations, on-coming space crafts and missiles. In the other program, *Liberator*, you roam around 5 landscapes (planets) killing various enemy robots, eluding their fire, and rescuing Federation refugees. I've chosen to review them together because they have so much in common.

These two games were programmed by Tim Moore and appear to be of the same quality and involve about the same level of effort for programming. Aside from their packaging, neither game provides instructions. I must admit that none are required because the games do not include any features that would require explanation, even for a novice. Both use colorful, low resolution screens, albeit blocky (8-bit-ish) graphics with the usual beeps and bops for sound. Another major characteristic that they share is that the programs lack any originality, or features taking advantage of the mouse, 16-bit technology or the ST. I'll come back to the last couple of similarities in a moment.

Timeblast is simply too slow and boring for today's software consumer. This program is reminiscent of early 80's Apple II programming. Unidirectional flights through ever-increasing difficulty of terrain (tighter squeezes) and foe (increased quantity). On-screen status of fuel, score and number of remaining ships complement the playing surface. Room for improvement exists in speed, enemy complexity, and number of degrees of freedom of the player's ship. Without improvements, this game is a loser.

Liberator has you roaming around in an "air-filter"-shaped cylindrical vehicle equipped with a limited amount of ammunition and a goal to destroy the enemy. Not a difficult concept. Not new either. Almost any *Xevious*-style game is better than this one. Of particularly poor note is the lack of smoothness when the on-screen player is moving. It is constantly interrupted by invisible obstacles well in front of the displayed objects. The enemy are quite "dumb" and unimaginative in their attack strategy. This program will not make it into my library.

The last common element about these programs is that they don't appear to have that professional quality "finish" that ST owner's have come to expect. Almost as if these were intended for the public domain (where other programmer's would be free to add features) and were released commercially (with haste) to get the new distributing company off the ground. I'm not sure that these programs are of sufficient quality to reach store shelves. We'll have to wait and see. I wish that I had.

PD-of-the-Month

Earlier I referred to this month's selection in a conservative manner, instead of in my usually enthusiastic way. Before I give the reason, let me remind you about PD software - it's FREE. Now that I've got that out of my system, *Darts* is a compiled GFA Basic program for 1-9 players. It uses a comprehensive aiming system involving the right mouse button.

(Continued on page 61)

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GOING ONLINE

By Ed Seward

BBS EXPRESS ST and FOREM ST

Since beginning "Going Online", I have dealt with telecommunications from the caller's perspective. This month I'm going to look at two BBS programs that I like very much: *BBS Express* and *Forem*. As many of you are aware, for the last seven months I have been the SYSOP of the WAACE ST BBS. For a year or so before that, I served as assistant SYSOP. So I have had quite a bit of time to work with these BBS programs.

The Numbers

Let's get some of the basic facts out of the way. The following is the maximum number allowed within each category for both of the BBS programs.

	BBS Express	*Forem*
security/access levels	32	32767
message bases	32	64
file areas	32	64

Most BBS' use a dozen or less file and message areas. Thus, although *Forem* supports more areas, the 32 areas within *BBS Express* ST are more than twice as many as most people will want. The same is true for the access or security levels.

Access Levels

The two programs work with access levels in two different ways. Within *Express* each file command has a minimum level assigned to it varying from 0 to 32. The security level can also be used within the script files that are written by the SYSOP.

Forem uses the access level at three points: within the file area, the database area and the doors or external programs. In the file area each file's download level is compared with the caller's download level.

As I said before *BBS Express* uses the caller's security or access level to control command availability. *Forem* uses masks so that the SYSOP can mix and match command access regardless of the users' download level. Once the SYSOP has their collection of masks built up, it makes for simple validation of new users.

One of the features I liked in *Express* as pertains to the command access is the ability to do mass toggling of a flag for all users. This is great for adding to or deleting from the lists of available areas.

Message Bases

Although both BBS programs have very similar editors and commands, they have several important differences in this area. First, *Express* does not allow locked messages within the message bases while *Forem* does. Actually according to proper BBS etiquette, locked messages shouldn't be used - that is what EMAIL (Electronic MAIL) is for and both BBS' support that. (*Forem* also supports FMAIL where one attaches a file to a message so that just that person gets the file. This is perfect for playing *Empire* by mail and using the BBS as a 'drop point' for the mail file. Secondly, *Forem* has two message types: the standard 20 line message or an 'extended' message of essentially unlimited length. *Express* has one message size per message base as determined by the SYSOP with a max size of 4000 characters. Thirdly, both programs allow the SYSOP to selectively permit reading or writing of messages for each message base by each user.

Express has three other options for each message base: edit, delete or print messages. (A related set of flags for each file area are: validate files, edit file descriptions and delete files.) These flags are great for dividing up the assistant SYSOP functions. An example of where this would be useful on the WAACE ST BBS is in the Magic SAC message base and file areas. If I wanted to allow someone very knowledgeable about the SAC to handle those just those areas, I would be able to do it with the options within *Express*. (*Forem* has the same commands but a person having access to those commands can use them in all the message or file areas.)

Appearance to Callers

This is another area where both programs have some strong points. *Forem* allows the SYSOP to have nine different graphic modes in addition to the usual ASCII screens. *Express* only supports the VT52 and ASCII though the VT52 support carries over into the Script language.

To take advantage of the various graphics screens for *Forem* you just use an editor such as Flash's or Interlink's (in the unfiltered mode) that displays all of the characters and not just the ASCII. You then create one variation of each text file for each graphic mode. This can be done in stages as *Forem* will display the standard text file if it cannot find the appropriate graphics file. I should mention that since *Forem* has no control language that the menu structure is fixed though one can edit the menu files.

BBS Express Script Language

By using the 'Script' language, you can go a long way towards setting up your own structure. While there are some constraints as to how much the main menu structure can be modified there is still a lot of flexibility in the program. The commands can be redefined. This allows the SYSOP to decide which letter executes which command best and this doesn't even require the script language. The script is a very powerful tool that gives the SYSOP access to 34 variables relating to the current caller's status and information. This doesn't include the 100 variables the SYSOP is able to define himself or ten VT52 functions available within the language. By calling up a script file from one of the menus you can add your own menus for such things as short helpful hints on the steps necessary for reading or entering messages or for file accesses. Many SYSOPs have done such things with the script as a greatly enhanced BBS lister, online games, data and bulletin areas. Some of these come on the program disks and others are on various BBS'.

A Few Miscellanious Points

Both programs come with an additional program to configure the software for the system it will be running on. (Both packages should run right out of the package though I heartily recommend adding some personality to your BBS.) *Express ST* also comes with an off-line User Editor to perform such things as increasing the authorized number of users/callers, printing out mailing labels, mass modification of the users' flags and more. The other nice touch in the Express User Editor is that it is GEM-based so that changes can be made very quickly. Both programs have a user editor as part of the BBS program for use while the BBS is up and running (while no one else is online).

Choosing a BBS Program

If you're considering running a BBS be sure to call several BBS' running the programs you are considering. Don't decide on just one call to each system. Also, after purchasing the BBS software of your choice, be sure to read the manual thoroughly. I found the manuals for both *BBS Express ST* and *Forem* to be well written and to have plenty of sample files. You've probably noticed that I haven't come right out and picked one program over the other. In my opinion one can't go wrong with either of these excellent programs.

Both programs are running on the support BBS for the respective companies:

ICD's *BBS Express ST*	815-968-2229
Commnet Systems *Forem ST*	617-877-8756

Finally I'd like to take this opportunity to thank both Matt Singer (*Forem*) and Keith Ledbetter (*BBS Express ST*) for the help they've provided me and for the great support they provide in general.

[BBS Express ST, version 1.3, ICD, Inc., 1220 Rock Street, Rockford, IL 61101-1437. Forem ST version 2.1, Commnet Systems, 50 Eaton Road, Framingham, MA 01701.]

RELAX AND ENJOY (Continued from page 58)

Programmed by Mike Hughes for low resolution playing, I had a lot of fun with it.

Now for the weak part. The game isn't really complete. It lacks game scoring - a mandatory element (if you're a dart player, you know exactly what I mean), although it does add up individual turns. It also lacks the feeling and excitement of darts. However, the quality programming is encouraging and with just a few simple additions would certainly be worthwhile. But, where is the source code? Without it, the game isn't worth having. If you can find a version of *Darts* with the GFA Basic source, some simple programming could enhance the excellent dart routines and make it "a must have program". Brief documentation is provided.

The moral. Wait before you jump. Sometimes even for public domain software you'll find it necessary. Someone once wrote, "Patience is a virtue". Well, I have to admit that they're right. We'd all be more relaxed and could enjoy our software more, if the authors and publishers alike waited until their product was the best it could be BEFORE releasing it. Hypothesis true.

TIPS 'N' TRAPS

By Jim Stevenson Jr.

Hello, all. Welcome back to #29 of Tips 'N' Traps. A lot has gone on since the last issue. Dungeon Master and Beyond Zork have made a big splash in the adventure industry up to date, and are the favorites this month in the way of problems. Currently, Electronic Age is down, so for those of you who are used to calling it, call the other two boards on the T'N'T list instead:

ARMUDIC.....(703) 569-8305
Merlin's Litterbox..(703) 250-7303

DUNGEON MASTER

Q. Any idea what the illumulet does (other than glow when your Champions wear it)?
-"Reforger"

A. It gives off a little light (Similar to a Lo Ful spell.)
-"Max Quordlepleen"

Q. Two questions: (level 6)
1: How do you get the third iron key? (As in, neither the one in Milius' grave or Filius' grave), but the one behind the portcullis.
2: How do you get into the passage that opens when you step on one square, but closes when you step on a surrounding square? (ie., in the area called "I don't like to be ignored"?
-"Max Quordlepleen"

A. Pull the handle next to the iron grate. Turn around and toss a heavy object into the blue mist. It may take more than one object to do the trick (I've been using treasure chests, and it takes two sometimes). The grate will open and you can get the key. By the way, you should take the plunge into the open pit in that chamber. There's nothing down there that can hurt you, and you'll find a green magical box in the maze. As for that "other chamber", I'm not sure where it is, or even if it exists. The only thing that seems to happen is that stepping on the pressure plate releases more unpleasant things. I've just avoided it and gone on to Levels 7 and 8.
-"Reforger"

Q. When Is A Rock Not A Rock? When it isn't a stone, or floor, or wall, or anything else for that matter.
-"Jack Flack"

Q. What's throwing the fireballs at me on Level 8? It's killing off my Champions as soon as I deal with the ghosts.
-"Reforger"

A. There are like holes in the walls. There is a button somewhere [green diagonal I think] that you have to push to turn 'em off. Best to find it quick because those are mean fireballs!
-"Jack Flack"

Q. How do you get into the 4th and 5th iron key doors on Level 6, and how do you get thru the blue curtain, and how do you get back thru the door that slams closed behind you?
-"Max Quordlepleen"

A. You'll have to do some fancy work with the keys to get through the blue curtain (I assume this isn't the "Test Your Strength" problem). You need to open the door first, then take two quick steps forward when the curtain is off. This may mean dropping some stuff, because if your Champions are overloaded, they can't move very fast. Once you get to the safe spot in the doorway, you do pretty much the same thing to get beyond the second curtain. There's a key in the chamber beyond. Once you use the key, the door that slammed shut will open again.
-"Reforger"

Q. What is the magic box used for? How about the moonstone? I've completely mapped out the first two levels, and am working on the 'Room of the Gem' section of the third. I was using hit-and-run tactics on a gang of mummies and got mixed up. I ran the wrong way and wound up getting pinned down between 6 mummies and 4 of the blobby blue guys (name?). Miraculously, I survived by lobbing all my torches at the mummies and luring the blue guys into the pit near the entrance to this section. I'm getting a bit tired of trekking back up to the first level to resurrect my casualties. How does one improve one's ninja skill rating? Qualify as 'precision weapons': just missle weapons?
-Chris Leonhard

A. Magic boxes freeze monsters dead in their tracks for a few moments, generally long enough for your Champions to whack away at 'em three or four times. This is a useful trick, but beware! The blue boxes disappear after one use, and are worth husbanding carefully -- I GUARANTEE you, they'll come in handy the first time you meet the purple worms (on the next Level down). By the way, I've been referring to the blue guys with the clubs as "blue meanies." Seems apt, and it reminds me of my favorite animated musical. We all live in a yellow subroutine, after all. As for improving ninja skills, practice your Champions with precisions weapons like the bow and arrow, or throwing stars. Oh, and don't worry about hauling your dead up to

Level 1 ... there's another Altar of Rebirth on your Level. Though it may take you some more work to get to it.

-"Reforger"

A. The Moon Stone is a necklace right? It improves yuour Mana by like 2-4 points. Nothing big but it helps a character with little [or no] Mana start off on the Sorcery trail.

-"Jack Flack"

Q. I have mapped most of level 2 and found the scrolls for VI and VI BRO. Are all spells learned this way or is experimenting recommended? Where does one encounter the purple worms and/or blue meanies?

-Archie Spivey

A. If your mana is at maximum and you don't have anything better to do with it, you can try experimenting with combinations that seem likely (use your own discretion, there are lots of possible combinations but some of them are obviously useless, and hence, not spells). With mana, it's use it or lose it when you're at max. The scrolls tend to tell you new spells shortly before you'll need it, so start practicing a spell as soon as you find out about it. All the spells I use now, I have found scrolls for (whether or not I discovered it before finding the scroll), so I wouldn't worry about 'missing' a really good spell because there's no scroll for it. Blue meanies appear on level 3; Purple worms on level 4. There is also at least one green ghost on level 4. I'm on this level now. Practice spells CONSTANTLY. You'll have a quartet of Craftsman Wizards and Priests before you know it.

-Chris Leonhard

Q. How do you get past the 'Test your Strength' blue mist on level 6?

-"Raven"

BEYOND ZORK

Q. Could you pleease help me in Beyond Zork? The question I have (I am not very far in the game), how do you get past the crocodile and the puppet? And give me any other hints that you think will help me. Which items should I sell?

-"Shaman"

A. I've been dodging around the cruel puppet. So long as you are always in a "room" with more than one exit, you can get away. If he's REALLY getting on your nerves, you can always zap him with the rod of annhiliation. I haven't seen the croc yet (remember, I got hooked on Dungeon Master before I finished Beyond Zork), but you can smear ANYTHING with the annhiliation rod. As for selling things, I've been trying to hang on to everything. Infocom games have a way of requiring you to use unexpected bits of flotsam and jetsam at odd moments. Wouldn't you HATE to sell the one thing you HAVE to have to finish the game?

-"Reforger"

Q. Okay, have you ever gotten to the basement room? I have yet to find a good light source. So far all I have found is the lantern. How do you cast the spells on the scrolls? And do you know how to get accross the bridge?

-"Shaman"

A. I take it you mean the cellar of the pub. You'll have to read the scroll you find down there (read the scroll, then say the word on it aloud), and all the goods you have with you will become new again, including the lantern. If you CAN'T read the scrolls, your character probably doesn't have enough intelligence points. You may have to restart with a smarter character. No, I haven't made it across the bridge ... yet. But I'll be working on it.

-"Reforger"

Q. How do I get the alligators jewel though?

-"Shaman"

Q. (1) How do you get out of the cellar of the pub? I got everything in it, but I can't get out! (2) How do you cross the bridge, or does the umbrella serve a purpose when it's broken? (3) Does anyone know the answer to the riddle on the cliff? (My tines be long, etc.)

-"Max Quordlepleen"

POLICE QUEST

Q. How do you get the girl out of the hotel so you can play poker? Also do you need the pen radio? If so how do you get it?

-"Raven"

PUZZLE PANIC

Q. Any tips on how to get on the beta sequence, and once there, how do you get through it?

-Len Poggiali

STAR VOYAGES

Q. What is the password that will make it possible to go from Star Voyage 3 to Star Voyage 4?

-Len Poggiali

SUSPECT

Q. How does one keep from being arrested for the murder?

-Len Poggiali

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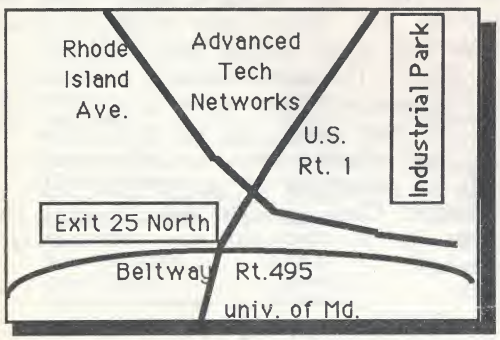

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WHAT'S IN THE BOX, DOC?

A Laser Printer Can Be Addicting!

By Frank Sommers

Out of the box comes two cubic feet of gray metal with a tongued slot in front and a black fenced grill opening for paper to exit at the top back. "Atari" in blue, "Laser" in pink italics and a tiny white "SLM804" in the middle across the front panel.

Let's face it, you sense a bit of a tingle, a little excitement. After all this is one of those way-out-of-reach, multi-thousand dollar, wonder machines of 5 years ago. And now its sitting there beside your Mega ST4 waiting to have its plumbing inserted and then commence sluicing out sheets of type-set sharp text. And even though you've read everything Wm. Price, desktop printing guru of CN, has said about laser printers without PostScript, being little more than fancy daisy wheel typewriters, your enthusiasm continues to rise.

In less than 45 minutes you have the innards in place, including the printing drum and the ink cartridge; all cables have been reconnected running your hard drive thru the laser printer and the laser itself plugged into the Mega hard-drive port. That's 45 minutes, if you have the Publisher showing you how to do it, after he, by himself, had spent several hours, reading and re-reading the slim documentation pamphlet and trying to insert pieces first this side and then that side up, as he erected his own.

TAKE "#1" !

Now the lights are on, the cameras are rolling, and the signal is given to the huge gray frog to croak out the "Test" sheet. First a click and a clack sound like the cocking of a miniature guillotine, then a soft whirring, and out comes your first sheet of laser printed text, demonstrating the shades available, and just where the 1/2 inch border fits around the paper. But whoops! No bottom border. A quick shift of the switch for regular or legal-size paper on the side of the paper-insert tray and the next sheet is perfect. Too bad you had to waste a sheet.

Waste paper? If you thought your computer system rabbited forth mounds of paper before this, wait for the laser. The speed with which it's text hypnotizes you into printing sheet after sheet until its appearance is exactly to your liking. And so now the snow storm of paper mounts and mounts.

Now all that was neatly and quickly done. Let's try producing an old article from CN? You load up your Diablo print emulator, call one of your favorite CN articles into *STWriter*, and whack. No click. No whirring. Nothing. But wait, this is not desktop publishing, this is merely trying to reprint old text.

A CONSTANT HEART

Two days later a patron saint has re-written your *STWriter* config text file to conform to Diablo standards, you've generated a new xyzzy.dat file by running config.tos and suddenly you're printing in various fonts of your choice. But sometimes you're printing the end of an article and sometimes the middle or beginning! No, meeting of minds between the printer and the driver on lines per inch or page length or whatever. And even though the paper continues to mound, and you've only produced one page of usable text in two days, two days of trying to match the laser with *STWriter* or more importantly with *WordPerfect*, still you're love of the laser is constant.

And now you're getting serious. The Atari laser and *WordPerfect* are the tools you wish to use in editing your articles, so you can turn out print ready copy, requiring a minimum of reworking by "The Publisher", before it goes into CN. Word Perfect Corporation, in its continuing stunningly good support of its product, recently made available a printer driver update for the Atari SLM804 laser. And when you received it, you immediately tried to generate double column text using various fonts and font sizes on a page. Nope. The fonts available in the size you needed were proportional and after about a half a page of text the laser conks out on you. The Word Perfect Atari laser printer driver couldn't handle more than a couple of paragraphs of proportional print. So back Word Perfect Corp. goes to their drawing board, and back you go to the old way of editing on *STWriter*.

DESKTOP PUBLISHING?

But from time to time you turn on the laser and generate a sheet of anything, or a short letter, just to hear it hum and whir and see the stilleto sharp print. Yes, life with a laser printer is like moving from a cassette drive to a floppy disk drive, or from there to a hard drive. Once you've done it you can't image doing anything else. No matter that for now desktop publishing with the SLM804 in a particular time frame is still a dream until someone generates the necessary software; maybe the next version of *Publishing Partner*? No matter. Moving from a dot matrix to a laser printer is a quantum leap in printing pleasure.

Then in a week, Word Perfect is back with a driver that handles proportional fonts, though limited in the range of pitches available. Part of the problem seems to be the mismatch between Atari's Diablo emulator and *WordPerfect* for the ST. The normal Diablo feeds data into the buffer until it receives a message saying the printer buffer is full, then it pauses. Atari's Diablo emulator is designed to handle the 520 ST on their laser, no matter that once it's up an running you're so limited in memory that you can't move. If Atari chooses to keep it's printer compatible with the 520 ST's then the size of the buffer apparently must be limited, and in simple terms no micro-spacing is possible in the *WordPerfect* driver for the SLM804. You see what this means in this article, for example where Word Perfect has created a driver that spaces proportional font letters correctly at the expense of space between the lines. The result is far from pleasing, and certainly not acceptable for a system that Atari hopes will be used in the business community.

A TEAM EFFORT

From this limited vantage point it would appear that Atari may risk offending two groups of people: those who buy a 520 ST and a laser or who have a 520 and get a laser, thinking there is enough memory there to "publish", and the rest of us who had hoped to combine Word Perfect with the Atari laser and generate eye-pleasing text. If we had that, then we might wait for the magic piece of software that would emulate PostScript and put us squarely into DTP. This would also put the Atari laser along with the Mega ST's squarely into the business and DTP computer community. (The potential of the Mega ST's and the laser can't be realized until there is commercially acceptable software to generate a product individuals and companies can be proud of. Then Mega owners can have a laser printer for under $2000 dollars that has 4 megs of memory, which would cost a couple of thousand more if you purchased a brand name printer with that much memory in it.) As Zerox would say, "It's a team effort". Let's have one, a team effort, with Word Perfect Corp., Atari!

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NOVATARI XL/XE LIBRARY

Announcing six new disks since we last advertised here! (Look for the *) The price for mail orders is $3 per disk plus $1 for postage and handling for every 3 disks. Send checks, payable to NOVATARI, to Alan Friedman, 5951 Heritage Square Drive, Burke, VA 22015.

Any user group librarians who are willing to trade library disks write or call Roy Brooks, 4020 Travis Parkway, Annandale, VA 22003 (703) 750-0146. We trade with groups all over the country.

DEMO

1: Miscellaneous
2: Movie Maker Clips
3: Heavy Metal
4: Miscellaneous
5: Desktop DOS + Demos
6: VizPics
7: Mandelbrot factal graphics
8:* Hitchhiker's Guide to the Galaxy
9:* Wizard of OZ

EDUCATION

1: Mathematics
2: Primary Language
3: Teachers' Toolbox
4: Word Builder 1.0
5: Animated stories
6: Geography
7: Bio+Chem with touch typing
8: Basic Math
9: Higher Math and Language
10: The Cell
11: Spelling Bee

GAMES

1: Text Adventures I
2: Gambling
3: Simulations
4: Mazes
5: Parlour Games
6: Graphics
7: Action! Games
8: Arcade Look-A-Likes
9: Text Adventures II
10: Text Adventures III
11: Surf's Up
12: Ski King
13: 20 BASIC Games
14: Super Quiz A & B
15: Two Graphic Adventure Games
16: Space Lords
17: Pinball Games
18: Machine Language Games
19:* Dandy Dungeon

LANGUAGE

1: Fig-FORTH
2: ACTION! source codes (cf. GAMES 7)
3: ACTION! Graphic Demos
4: ACTION! Utility Programs
5: ACTION! Modules #1
6: ACTION! Modules #2
7: BASIC XL-REF Base
8: ACTION! Modules #3
9: KERMIT telecom
10: TURBO BASIC
11: Pascal Sampler
12: Searcher XL Turbo
13: Turbo Basic for 400/800
14: C Language

MUSIC

1: TV/MOVIE Themes
2: ROCK
3: JAZZ
4: BASIC with animation
5: Ams Player: 12 Rock Songs
6: Ams Player: 14 Movie/Video Themes
7: Ams Player: 16 Oldies
8: Ams Player: 18 Classics
9: Ram130 AMS Beetles' Songs
10:MUSIC COMPOSER Songs

UTILIITY

1: Miscellaneous introduction
2: Printers
3: DOS 2.5
4: Directory & Label Printer
5: Graphics Trilogy
6: Copymate XE
7: SCOPY sector copier
8: Translator Disk
9: 256K Upgrade
10: Daisy-Dot NLQ
11: DOS 2.6
12: MACHDOS 2.1
13: Print Shop Editor
14: Easy Find
15: Print Shop Icons
16: TEXTPRO 1.1
17: Print Shop Icons
18: Touch Edit
19: DOS 4.0
20: Graphics
21: 130XE upgrades + Utilities
22: HI-RES 130 (graphics)
23: Rainbow DOS
24: Font Master
25: 3-D CAD
26: Adelaide Symbolic Disassembler
27: DB's & Spreadsheet
28: Graphic Utilities & Pics
29: String Magic
30:* Print Shop Icons
31:* Hacker's Toolkit
32:* Weekly Scheduler

TELECOMMUNICATIONS

1: 850 Interface
2: 835/1030 Modem
3: MPP Modem
4A: AMODEM 7.2
5A&B Chameleon Terminal Emulator
6: 1030&850 Express (3.0 & 2.1)
7:* Data Com
8: AMIS XM10 BBS program
9: AMODEM 7.4 + Rverter

Current Notes ST Library

NEW DISKS FOR MARCH

#209: GAME DISK NO. 11. Try your hand at Las Vegas:Poker, Black Jack, Roulette, and Slots.(C).

#210: GAME DISK NO. 12.@Two versions of Pacman; Create your own jigsaw puzzles from DEGAS pics; Drive a race car around a track and create your own tracks with DEGAS; try to get your car to the top of the hill in widow maker; program to make your invincible while playing TIME BANDIT.

#211: GAME DISK NO. 13.@For younger kids:two musical programs (KIDMUSIC and KIDPIANO); Make your own Mr. Potatoe Head with KID POTATO; and KIDMIXUP - display pics that tell a story when placed in proper sequence.

#212: MONO GAME DISK NO. 4. Spacewar - battle Klingon crusier in gravity well near a star; Megaroids - immitation of Asteroids; Runner - multiple screen arcade game; Squixx - wall off as much of the playing field as possible while avoiding the power spikes and gobbling creatures.

#213: MONO GAME DISK NO. 5. Adventure writing system for creating your own adventures; Daleks - graphic strategy game; Krabat2 - play chess against the computer; Stocks and Bonds; Eliminator - interesting variation of a card game; two desk acc games: breakout and reversi.

#214: SPECTRUM 512 MOVIE ANIMATION. Imitation of Amiga demo that shows four monitor screens at the same time each with a different animated display.

#215D: A.I.M., Version 2.3 (DS). Atari Image Management System (color or mono). Sophisticated image manipulation program from Germany that lets you perform math on images (can read in NEO and DEGAS pics).

#216: MUSIC STUDIO NO. 5. Over 70 new songs for use with Music Studio. Includes PD player so you can create your own music albums. Works with MIDI.(C)

#217: MUSIC STUDIO NO. 6. Another 70+ songs for use with Music Studio. Includes PD player so you can create your own music albums. Works with MIDI.(C).

#218D: PLAY IT. (DS) Programs on this disk allow you to input a sound file from ST Replay and output a file that can be polayed with either of the two player programs provided. Disk includes a collection of ready to play 'SND' files. Here your ST talk!

#219: DBMAN DEMO DISK. Demo version of the latest release (Version 4.0) of dBMAN. Databases limited to a maximum of 20 records.

MARCH SPECIAL-GAMES

Our special for March features ST Games. Order any 9 disks on this page and receive a 10th disk free. First 50 orders will also receive a free 10-disk plastic case.

CN GAME DISK LIBRARY

#14: NEOCHROME. Program, docs, pictures.
#21: GAME DISK NO.1. (C) Megaroids, Mastermind, Othello, Backgammon, Ripcord, Target, Life, Journey
#37: GAME DISK NO.2. (C) BASIC Games(Bomber, Scratch, Switchbox), Celestial Caesers, Ripcord, Score4, Battleship, Blackjack, Mad Libs, Maze Maker, Mylife, Box the Dragon, Mastermind, hints for SUNDOG.
#39: ARCADE DEMOS. (C) working demos of JOUST, TIME BANDITS (ver .96), and CRACKED.
#54: MONO GAME DISK NO.1. PuzzlePuzzle, move forward through labyrinth by completing puzzles.
#62: HACK. Dungeons and dragons like game where you (the adventurer) descend into the depths of the dungeion in search of the Amulet of Yendor
#80: MONO GAME DISK NO.2. MONOPOOL - a pool game with 6 balls; KRABAT - a chess game for beginning to intermediate players.
#100: GAME DISK NO.3. (C) Football, Break Out, Missile, 4 Adv. Games (Larn, Magnon, Twilight Zone, & Ogre).
#101: GAME DISK NO.4. (C) Atartrek, Celestial Caesars (new ver.), Krabit (chess), Twixt, ST Aggrevation.
#112: GAME DISK NO.5. (C) Checkers with 6 skill levels; A slot Machine; Warzone and more.
#122: GAME DISK NO.6. (C) Monopoly, Haunted House, Backgammon.
#135: SHANGHAI DEMO PROGRAM. (C or M). full implementaton for single puzzle, solitaire version only.
#139: MONO GAME DISK NO.3. larn2, ogre, ataritrek, maze maker, checkers, battleship, window ball.
#140: GAME DISK NO. 7. (C) Tripple Yahtzee, Wheel of Fortune, Pente, Sensori, Spacewar.
#141: GAME DISK NO. 8. (C) Azarian and DGDB (similar to SHAMUS).
#153: EAMON ADVENTURE GAMES. (C or M) All the latest versions (Eamon Beginner's Cave; Devil's Tomb, Eamon Death Star, Holy Grail, 1st Eamon game version; ver 2.0 of main hall).
#164: GAME DISK NO. 9. (C) Stone Deluxe, SHip Combat, Lander, Lunar.
#178: BREACH SCENARIOS. 16 scenarios ranging from easy to star level for use with Breach.
#179: KID FUN. (C) For younger kids: Kid Notes (musical keyboard player); Barnyard (simple version of Concentration); Kid Sketch (drawing programn). For older kids: Doodle (drawing program); and Deluxe Piano Player (keyboard piano).
#187: WHEEL OF FORTUNE. (C) Ver 2, Includes 26 puzzle files (Beatles, Child, Clothes, Computer Fauna, FilmLit, Flora, Fun, OTBible, Software, Shield, Titles, US Air, Vacation, Yum-Yum.
#188, #189, and #190: MEAN 18 COURSE DISKS NO. 1,2,3. Courses for use with Mean 18 golf game.
#207: STATISTICALLY ACCURATE BASEBALL. (C or M) Baseball strategy game (no graphcs). Includes data for 4 teams ('62 Giants, '70 Reds, '84 Cubs, and '86 Mets).
#208: GAME DISK NO. 10. (C) Milborne, G-Ranger (arcade game); NIM (GEM version); Trucker (text-based 18-wheeler simulation); Darts (dart-throwing game).

Order from Current Notes Library, 122 N. Johnson Rd., Sterling, VA 22170. $4/disk plus $1/(6 disks) for shipping.

NOVATARI
Northern Virginia Atari Users' Group

President.....	G.Weatherhead.....	703-938-4829
VP-ST.....	Ian Charters.....	703-845-7578
VP-8BIT.....	Alan Friedman.....	703-425-0575
Treasurer.....	Curt Sandler.....	703-734-9533
Secretary.....	Edmund Bedsworth..	
Membership.....	Earl Lilley.....	703-281-9017
Prg. Chr. XL/XE	Randy Ingalsbe....	703-644-0159
	Nina Kraucunas....	703-250-3572
Prg. Chr. ST...	Jim Stevenson.....	
	Duane Shie.....	703-430-9693
Telecom SIG....	Ed Seward.....	703-573-3044
MSDOS SIG.....	Mike Gibbons.....	703-440-0379
SYSOP-ARMUDIC..	Ted Bell.....	703-455-5312
SYSOP-WAACE....	Ed Seward.....	703-573-3044
LIBRARY-8-BIT..	Roy Brooks.....	703-750-0146
MAIL...	Al Friedman.....	703-425-0575
LIBRARY-ST.....	Bob Bell.....	301-593-0889
.....	Glen Bernstein....	703-455-6053
HOTLINE.....	Andrea Bonham.....	703-534-3503
ATARIFEST'88...	Gary Purinton.....	703-476-8391

ARMUDIC BBS (XL/XE).....	703-569-8305
WAACE BBS (ST).....	703-280-9072

New Members: Dues are $20/year/family which includes a subscription to *CURRENT NOTES*. Join at the main meeting or at a chapter meeting or by sending $20, payable to NOVATARI, to Earl Lilley, 821 Ninovan Road SE, Vienna, VA 22180.

Novatari Main Meeting is at the Washington Gas Light Building, 6801 Industrial Road, Springfield, VA. Take 495 to east on Braddock Rd (620) to south on Backlick Rd (617). Left on Industrial Rd. Washington Gas Light is the 2nd building on right. 5:30 Telecom Sig; 6:15 Door Prizes, announcements, Open Forum1; 6:45 Vast and 8-bit Sig Meetings.
Mt. Vernon / Hybla Valley, 1st Thursday, 7:30. Contact Ron Peters at 780-0963.
Sterling, Sterling Library, 7:30-9:30, 1st Wed. Contact Wayne Wilt 437-6159.

President's Notes

I warned you that I would not work as hard this year as I did last year, but you elected me anyway. Others, though, have been working very hard and have pushed me into activity. Edmund has managed a great deal of publicity by placing meeting announcements in many papers. This has brought a flood of requests for information. I expect many visitors to turn into members. Nina has been calling vendors and developers. They in turn have been returning the calls to me. Exciting products for the XL/XE computers will be forth coming this year. I expect Omegasoft's mouse to stimulate a lot of new software and rewrite of old favorites.

Local stores have been refering new customers to us. It has been suggested that we put out a flyer with basic information for getting started on an XE/XL or ST with our membership information included. Writers wanted. Interest in the ST networking game has brought other calls. Upgrading the WAACE BBS to 80+Mb hard drive is our other big development. We hope to be ready for the development of two line BBSs.

Virginia Tech had a computer club show Feb.15. Frank Chan asked for help displaying the ST as our big competitor was to have four computers. Ed Seward set him up with some spectacular demos. He also was given an Atari banner from Atarifest. Frank will be organizing a Users Group as an outgrowth of this show. Three names had been suggested- A BUG (Atari Blacksburg UG), BATHIUG (Blacksburg Atari Technical Hackers at Tech. UG), and FIRST BACE (Finest In Reasoning ST Blacksburg Atari Computer Enthusiasts). When Frank visits us at spring break, we'll discover the results of the Tech computer show.

Atari Explorer printed wrong information on dates for the Pittsburg show. Do visit the PACE show at Robert Morrison College March 19/20.

A new Walden software store has opened in Manassas Mall. They sold out of their XE/XL software right away. We hope they restock soon. They have ST software too. They will be showing us their wares at the March meeting. Warning! Manassas Mall on Sudley Road does not have a sign. Look for Montgomery Ward store and go inside the mall.

WAACE BBS new users, please don't use the number listed in February *CURRENT NOTES*. That is the voice Hotline number, on which Andrea Bonham and family use. She will give you by voice names of people who will help you. The Bonhams have been very good natured about being awakened in the middle of the night by a phone call that just whines. I don't know if they will take another month of it. We don't want to lose that active family.
Both 8-bit and ST program chairmen have been at work. They need your input for your desires. Also, if you have purchased a commercial program that is hot off the press or that is particularly useful to you, will you let them know that you would share it at a meeting. Don't miss a meeting.

Board meetings: 7:30 on Mar 2 & 30;
Member meetings: 5:30 on Mar 13 & Apr 10.

LIBRARY BULLETIN

Novatari Library revisited and revised!

By Roy Brooks

The wealth of public domain material that we see being shared and created has not stopped with the commercial desertion of the Atari 8 bit system. The user groups, sysops and individual owners are still very active. Do you suppose there's life left in our 8-bit machines? I'm here to tell you there is!

Al Friedman's articles on public domain programs in the library have stirred up renewed interest the upgrades and revisions to the Novatari library. Al and I have added over 20 disks since the end of last year. Quite a few changes have occurred on existing disks and Novatari will exchange older versions for the newer ones if you bring or send in your disks. If your send them in, please include return postage. See our ad for Al's address.

Some of the changes we have made simply involved correcting the labels. For example, Ski King (Game Disk #12) said the Docs were on the back although they were actually on the front. In most of the changes, we have added programs to the disks. Sometimes because of lack of space, we have deleted files to make room for better or more up-to-date ones. We have kept our disks single density with 707 sectors so even if we use DOS 2.5, 810 drives will still be able to read them.

One of the first changes I made to the library was dropping the old Relational Database Management System (Utility #4). In #4's place, I put the Directory and Label printer. I couldn't get the relational database to list, enter or load and neither could the other members I asked about this disk.

I'm looking at CN Vol. 5 No. 5, June 1985 where the original Utility #4 was announced as a future addition. A lot of changes have been made since then. The library had 21 disks that issue and 8 of them were game disks. Today, Novatari has 100+ with only 19 of them game disks. The demo category has been added and the home productivity and utility, language, education, music, and telecom disks have more than doubled.

The original Pascal Sampler (Language #11) was upgraded with a file segmenter for those long word-processor files that don't fit in memory. I have come across a newer version of Textpro (Utility #16) but I haven't decided how to incorporate these changes yet.

Daisy-Dot NLQ (Utility #10) has been supplemented with Dot-Magic on the backside. Dot-Magic is a comprehensive revision to Daisy-Dot done in Turbo-Basic with on-line typing, easier file printing, two picture size options and a neat custom label maker.

The original MACH DOS 2.1 (Utility #12) has been augmented with MACH DOS 3.7 which offers many more features that the original DOS and has a more thorough documentation. The menu is different than Atari DOS's but it has some familiar functions. Five sub programs accompany this DOS: CONFIGUR, BACKUP, RESTORE, COMPAR and PATASC. However, we are missing PATASC which is a fast print program for files with atascii characters. If you know where we can get this program, let us know.

Oops, I forgot Print Shop Editor (Utility #13). I have taken the Docs from Amudic for this program and added them to the back of the disk. In order to do this, I had to convert the 57 icons on the back to Atari DOS rather than the original PS DOS. Use the DOS COPY function to print out the Docs and use the convert feature on the editor from the front of the disk to convert the icons you want for use with the original PS programs. You can use these icons "as is" with Typesetter.

EASYFIND (Utility #14) has been supplemented with Turbo EASYFIND on the backside. This will speed your searches through the indexes of Antic, Analog, and Compute! sold by Sierra Services. You can also create your own DB using the EASYFIND system. See the Docs on the disk.

The 130XE Upgrades+Utilities disk (Utility #21) has been changed to include a DOS 2.5 modification which adds Ramdisk 8 at 707 sectors and another Ramdisk #(x) of 707 sectors.

The Telecom disk #6 has had the the DUP.SYS removed to make room for the handler and documentation file for the SX212 1200B modem. In order to copy files from this disk, you have to load DOS from another disk.

As you can see, 8-bit public domain software is in a dynamic state. I often come across newer versions of programs with improved features. We will continue to upgrade the library disks and add new disks that we find in the Public Domain. If you know of any good sources of 8 bit PD software, please let us know. Write to Al or Roy (our addresses are in the Novatari ad). Our next article will discuss our new disks and note any more upgrades.

A.U.R.A.
Atari Users Regional Association

President.....	Steven Rudolph....	301-464-0835
8-bit VP.....	Bob Langsdale.....	301-390-6554
16-bit VP.....	James Bonbright,Jr	301-933-4891
Treasurer.....	Bob Brock.....	301-268-2554
Membership.....	Dave van Allen....	301-593-4654
8-bit Libr.....	Wayne Heiden.....	301-330-0130
16-bit Libr....	Herb Lane.....	202-332-3618
Equipment.....	Jesse Ayer.....	301-345-1592
Facilities.....	Richard Stoll.....	301-946-8435
Used Equip.....	Lincoln Hallen....	301-460-5060

Meetings - Next meeting is April 21st in the Temple Isreal Social Hall (420 University Blvd. E., Silver Spring). Library sales begin at 7pm with the meeting running from 7:30 to 9pm. Hardcopy output of graphics (8- and 16-bit, color and b/w) will be the theme for the April meeting. There will 8-bit and 16-bit door prizes.

Correspondence. All correspondence, including membership renewals, changes of address, etc. should be sent to: AURA, P. O. Box 7761, Silver Spring, MD 20910. AURA cannot guarantee *CURRENT NOTES* subscription fulfillment unless the member provides written confirmation of address changes, renewals, etc. to the address given above.

New Members. Dues are $20/year and include subscription to *CURRENT NOTES*. Send name, address, phone number, and check to above address.

February Meeting - Chris Amori of Applied Computer Associates (ACA) gave a quite impressive demonstration of the MEGA ST and ATARI Laser Printer and explained ATARI's stategy for entering the business market. He shared his recent experiences dealing with ATARI from a dealer's point of view (which is quite different from the user's). He also discussed the latest in word processing, desktop publishing and graphics. The new president introduced the newly elected officers and stated the direction that they have planned for AURA in 1988. The officers have called an organizational meeting for February 20th. Attendence was larger than expected and disk sales were quite brisk.

AURA-1988 and Forward
by Steven Rudolph, President AURA

Time marches on and AURA is not standing still. I, along with the other new officers, plan some exciting changes for 1988. If you are a member and haven't attended a meeting for a while, I invite you to participate; you won't be disappointed. If you have friends with ATARI inclinations, please tell them about us. Beginning with April, we are changing our meeting date to the third Thursday of the month (see the AURA section at the back of the magazine for details). So if our old meeting date conflicting with other activities, you can now attend and benefit.

Just as ATARI has evolved from the archaic 400's with its membrane keyboard, cassettes and 16k to the 130XL's, game machines and the ST's, AURA is evolving to meet the needs of its changing membership. Here is what we plan:

XL's and ST's - We have separate 8-bit and 16-bit vice presidents who will plan and coordinate separate presentations at our meetings. Our meeting room is comfortable, well equipped and large enough to easily handle both. We will establish a theme for each meeting and will highlight new and exciting additions to our disk libraries as well as theme-related disks. For example, income tax programs and techinques was the theme for March and graphics (hard copy) printer output will be April's; in May, telecomunications. Future themes will be decided at the meetings by the membership. One of the demonstrations planned for April will be graphic output from a color ink-jet printer. So come, get involved, be informed.

Disk libraries - We are improving our public domain libraries which constitute major resources of the group. We are setting up data bases, cross-referencing programs by type, making it easier to find the right programs from our large, varied and high quality libraries. 8-bit owners take note, our extensive library contains a wealth of programs not to be found in the CURRENT NOTES collections; 8-bit support is high priority at AURA. Some of the older disks contain some useful programs hidden within the large number of obsolete files. Our librarians and specialist members will throw off the chaff and repackage more useful disks. In addition, programming members are being asked to donate their labors to the library or use it as a vehicle for selling commercial-quality programs (some of these are in the works).

Outside resources - We will be contacting software publishers and local computer retailers to either come in and demonstrate a program or piece of equipment or send it in and we'll demonstrate it at the meeting. In our early years, the meetings were rich in this valuable vehicle for finding out what's new and good. Applied Computer Associates (ACA), check their ad in CURRENT NOTES, will be giving demonstrations on a regular basis. This should be an exciting and useful addition to our meetings as well as means of finding out what's good and what's hype. This is especially important for the XL's where there have been fewer and fewer new releases.

Special interest groups - Some members have specialized interests and AURA will support them. We are planning to establish and support SIG's for programming, music/MIDI and other popular subjects. These groups should be a valuable resource for the total membership in assessing new programs and instructing other members just embarking in new areas.

Promotions - From time to time will we have special promotions to increase interest and attendence in our meetings. These will include door prizes (separate 8-bit and 16-bit) and special offers from our disk libraries.

Help for new members - New Atarians often have a tough time getting started; the documentation included with the equipment and software can be poorly written and frustrating. They have trouble identifying what their real problems are and may feel embarrassed asking what they feel may be 'dumb' questions. We understand their plight and are putting together materials to help them along. We have found that this is not just for the ST's but we are getting members that are just starting out on their XL's.

Bulletin boards - We are establishing BBS coordinators for the major 8-bit and 16-bit bulletin boards (Compuserve and Genie) to download programs for the libraries. If you know of programs that you want, we'll get them for you for the price of a library disk.

AURA is on the move and the direction we are taking is forward. We are striving to make an established club with over 170 members an even better, enjoyable and more responsive and valuable resource for all Atarians. So, please attend one of our meetings; there's nothing to loose except informative, interesting and entertaining meetings, an excellent disk library, and, the camarademie of dedicated ATARI users.

N.C.A.U.G.
National Capital Atari Users' Group

President.....	Peter Kilcullen..	202-296-5700
Vice President.	Mike Pollak.....	703-768-7669
Treasurer.....	Allen H. Lerman..	301-460-0289
XL/XE Librarian	Mike Pollak.....	703-768-7669
ST Librarian...	Enrique Seale....	202-295-0112

MEETINGS: 3rd Tuesday, 5:30 - 8:30 pm, room 543, National Science Foundation offices, 1800 G St., NW, Washington, DC. Closest subway stop is Farragut West on the Blue and Orange lines. Building is identified by sign for Madison National Bank on the corner. Front entrance is on west side of 18th between F and G.

NEW MEMBERS: Membership dues are $20 and include a subscription to *CURRENT NOTES*. Join at the meeting or send check, payable to NCAUG, to Allen Lerman, 14905 Waterway Dr, Rockville, MD 20853.

W.A.C.U.G.
Woodbridge Atari Computer Users' Group

President.....	Lou Praino.....	703-221-8193
First VP.....	Arnie Turk.....	703-670-2547
8-Bit VP.....	Darrell Stiles...	703-494-9819
8-Bit Board Rep..	Stan Rupert.....	703-670-3338
ST VP.....	Bill Parker.....	703-680-3941
ST Board Rep.....	Bill Brooks.....	703-895-5404
Treasurer.....	Chris Moore.....	703-670-5143
Secretary.....	Frank Bassett....	703-670-8780
Librarian.....	Mike Stringer....	703-791-3331
Past President...	Jack Holtzhauer..	703-670-6475

MEETINGS: 7-10PM, Community Room, Potomac Branch, Prince William County Library, Opitz Blvd., Woodbridge, VA. Entering Woodbridge from either North or South on Route 1, proceed to the intersection of Route 1 and Opitz Blvd. (opposite Woodbridge Lincoln-Mercury). Turn West on Opitz and take first left turn into the library's parking lot. The Community Room is located to your left immediately upon entering the main building. Meeting Dates: Feb. 9, Mar. 8, Apr. 19, May 10, June 13.

NEW MEMBERS: Initial membership fee is $10/yr plus $1 monthly dues. Membership includes a subscription to *CURRENT NOTES*. Join at meeting or send check, payable to WACUG, to Frank W. Bassett, 15313 Blacksmith Terr, Woodbridge, VA 22191.

S.M.A.U.G.
Southern Maryland Atari Users' Group

President.....	Thomas Crosby....	301-843-1310
Sec/Disk Lib.....	John J. Smith....	301-862-9490
Treasurer.....	Samuel Schrinar..	301-843-7916
Newsletter Ed....	Leroy Olson.....	301-743-2200

MEETINGS: 2nd Thursday, 7:30 pm, John Hanson Middle School in Waldorf, MD. Traveling thru Waldorf either east or west on Rt 5, exit on Vivian Adams located 200 ft west of Waldorf Carpets & Draperies and directly across from the Village Square sign.

NEW MEMBERS: Membership dues are $20 and include a subscription to *CURRENT NOTES*. Join at the meeting or send check, payable to SMAUG, to Sam Schrinar, 2032 Alehouse Court, Waldorf, MD 20601.

CN REGISTERED CLUBS

Members of registered clubs receive CN at a discount rate ($17/year). To registered your club, send in an initial subscription list of 10% of the membership or 6 members whichever is less. For more information, contact Joe Waters, 122 N. Johnson Rd., Sterling, VA 22170.

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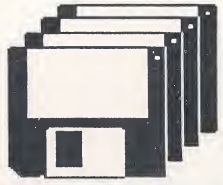

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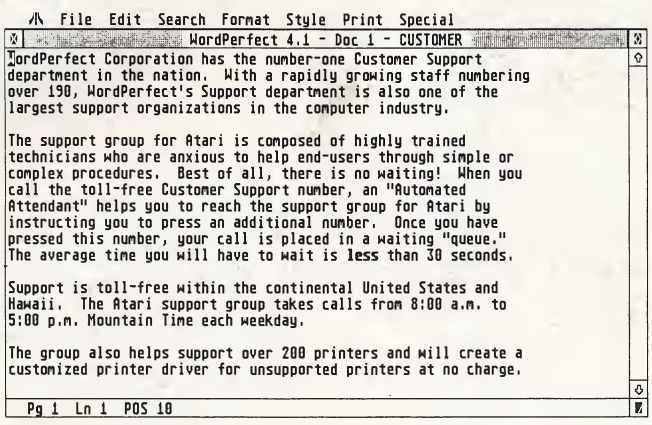

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